

# State Level Analysis of Accredited Higher Education Institutions of Maharashtra



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद  
विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

*An Autonomous Institution of the University Grants Commission*



# NAAC

## VISION

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To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.

## MISSION

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- ❖ To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;
- ❖ To stimulate the academic environment for promotion of quality of teaching-learning and research in higher education institutions;
- ❖ To encourage self-evaluation, accountability, autonomy and innovations in higher education;
- ❖ To undertake quality-related research studies, consultancy and training programmes, and
- ❖ To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance.

## VALUE FRAMEWORK

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To promote the following core values among the HEIs of the country:

- ❖ Contributing to National Development
- ❖ Fostering Global Competencies among Students
- ❖ Inculcating a Value System among Students
- ❖ Promoting the Use of Technology
- ❖ Quest for Excellence

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**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

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Post Box No. 1075, Nagarbhavi, Bengaluru - - 560072, INDIA

## Expert Committee

### External Experts

**Dr. Dhanraj Mane**  
Director  
Directorate of Higher Education  
Maharashtra

**Dr. Khalil Musa Shaha**  
Statistician  
Institute for Social and Economic Change  
Nagarbhavi, Bengaluru  
Karnataka

**Dr. Shirish Chindhade**  
Ex. Principal  
M.U. College of Commerce  
Pune  
Maharashtra

### Internal Experts

**Dr. Devender Kawday**  
Deputy Adviser  
NAAC, Bengaluru  
Karnataka

**Dr. Wahidul Hasan**  
Senior Communication-cum-Publication  
Officer, Library (i/c)  
Convener Research and Analysis Wing  
NAAC, Bengaluru  
Karnataka

**Dr. S. Srikanta Swamy**  
Academic Expert  
Research and Analysis Wing  
NAAC, Bengaluru  
Karnataka

**Dr. Neelesh Pandey**  
Assistant Adviser  
NAAC, Bengaluru  
Karnataka

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## Foreword



It gives me immense pleasure to know that National Assessment and Accreditation Council (NAAC), Bengaluru is bringing out a State-wise Analysis of NAAC Accreditation Peer Team Reports. The criteria-wise quality parameters have been analysed scientifically and relevant statistical tools have been applied so as to bring out this research publication by NAAC.

I appreciate NAAC for exhibiting its keen interest in undertaking research with the primary data available in the form of Self-study Report (SSR), Annual Quality Assurance Report (AQAR), Peer Team Report (PTR) and Peer Review Score Sheet (PRSS) of each NAAC accredited University and College in India.

To being with, NAAC has published the analysis of NAAC Accreditation Reports of Institutions from 14 States, viz., Andhra Pradesh, Delhi, Gujarat, Haryana, Union Territories-Jammu Kashmir and Ladakh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, North-Eastern States, Tamil Nadu, Telangana, Uttarakhand and West Bengal, I hope that the State-wise Analysis of NAAC Accreditation Reports will be helpful to the Colleges and Universities to understand the areas in which they need improvements for achieving quality and excellence in Higher Education. This report will also provide valuable information to the policy makers in Higher Education.

I take this opportunity to acknowledge the contributions of the officials of NAAC and the external experts in carrying out this analysis. I also compliment Prof. V.S. Chauhan, Chairman, Executive Committee of NAAC under whose leadership this initiative has been undertaken. I also extend my best wishes to Prof. S.C. Sharma, Director, NAAC for initiating this exercise and hope similar analysis shall also be done for the remaining states as such analysis will be useful in furthering the cause of quality education in the country.

A handwritten signature in black ink, appearing to read 'D.P. Singh'.

**(Prof. D.P. Singh)**

Chairman, UGC

and

President, General Council, NAAC

New Delhi

8<sup>th</sup> October 2020



## From the Director's Desk



The National Assessment and Accreditation Council (NAAC) is an autonomous body established by the University Grants Commission (UGC) of India to assess and accredit institutions of higher education in the country. NAAC's vision is to enhance quality of higher education in India through a holistic process involving internal and evaluation, promotion and sustenance initiatives.

The assessment and accreditation process of NAAC has been successful in meeting new challenges and has contributed greatly to quality consciousness among institutions. The core values of NAAC expects Higher Educational Institutions of the country to contribute for national development, foster global competencies among students, inculcate a value system in students, promote the use of technology and develop a quest for excellence. Maintaining Quality at the Institutional level depends on internal as well as external factors. Stake holders of higher education also have greater responsibility to join hands with government, policy makers and funding agencies to develop a quality education system. NAAC, through its Assessment and Accreditation process, has created greater awareness among higher educational Institutions to commit them to provide quality education based on various quality parameters.

Every year, NAAC assesses hundreds of Universities and Colleges (Constituent / Affiliated as well as Autonomous) across the country. The state level analysis of Assessment and Accreditation institutions of Maharashtra is the latest updated in Assessment analysis showcasing the assessment and accreditation status of HEI in Maharashtra. At present Maharashtra is the only state in the country which has maximum number of institutions Accredited with NAAC's Assessment and Accreditation process.

As a self introspection and in order to achieve the core objectives of NAAC i.e. facilitating quality and excellence in higher education, NAAC has been analyzing the 'Assessment and Accreditation Reports' (qualitative and quantitative) of states where accreditation process of the Higher Education Institutions (HEIs) have progressed.

Such analyses of Accredited institutions (State-wise and Region-wise) help to understand the scenario of quality assurance in higher education and aid state governments, departments of collegiate education and universities to plan their future quality assurance

and enhancement activities on the basis of the recommendations that ensue from these Analysis.

Keeping all these in mind, the state level analysis of Accredited Higher Education Institutions of Maharashtra seeks to provide a bird's eye view of NAAC accredited institutions of the state. It does so by briefly introducing NAAC's system of assessment, accreditation and grading to provide a comprehensive quantitative and qualitative analysis of assessment reports of these institutions. Further, it also sets out a road map for further planning of quality enhancement in the Higher Education Institutions of Maharashtra.

This report has been prepared by a team of experts consisting of Dr. Devender Kawday, Dr. Wahidul Hasan, Dr. Neelesh Pandey, Dr. S. Srikanta Swamy, Dr. Dhanraj Mane, Dr. Khalil Shaha and Dr. Shirish Chindhade. I appreciate their efforts in taking pain in collecting, collating and interpreting information and data in terms of quality improvement.

Special thanks to Department of Higher Education, Maharashtra for their input and academic support.

My heartfelt appreciation for Dr. Devender Kawday, Deputy Adviser, NAAC, Dr. Wahidul Hasan, Sr. Communication-cum Publication Officer, NAAC, Dr. Neelesh Pandey, Assistant Adviser, NAAC and Dr. S. Srikanta Swamy, Academic Consultant of the Research and Analysis Wing, NAAC for their keen interest in taking up this project.

We hope that this publication will help governments, institutions and the stakeholders of higher education in enhancing the quality of Higher Education Institutions (HEIs) individually and collectively. I hope this state level analysis of Accredited Higher Education institutions of Maharashtra will help in motivating all the stakeholders to understand the ground reality in terms of strengths and weaknesses of the Institutions with respect to quality education and guide them to do better in future.

***“Quality is not an act, it is a habit”***



S. C. Sharma  
**(Prof. S.C. Sharma)**  
Director

## Acknowledgement



We are ever grateful to Prof. S.C. Sharma, Director, NAAC for his vision about the wing and also for his continuous support in bringing out this State level Analysis of Accredited Higher Education Institutions of Maharashtra.

We owe our immense debt of gratitude to Dr. Dhanraj Mane, Director, Directorate of Higher Education, Government of Maharashtra for his encouragement and support and also staff of Directorate of Higher Education, Maharashtra for their active involvement and also for providing the necessary information of Higher Education Institutions.

We are grateful to Dr. Khalil Musa Shaha, Statistician, ISEC, Bengaluru, Dr. Shirish Chindhade, Former Principal, M. U. College of Commerce, Pimpri, Pune for their hard work, support, analysis of the data and valuable inputs.

We also thank Mrs. Manjula M. for her support and timely help for the completion of the report.





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## Chapter – 1

# Introduction to Maharashtra

### 1.1 Location

Maharashtra was formed in 1956 as 'Bombay Province' along with Gujarat. However, due to strong movement for a separate State, Maharashtra was separated from Gujarat and given a statehood on 1<sup>st</sup> May 1960. The State is situated between 15°45 North to 20°6 North latitude and 70°36 East to 80°54 East longitude on western part of India and surrounded by Madhya Pradesh, Gujarat and Dadra and Nagar Haveli (UT) to the north east to north west, Chhattisgarh to the east, and Telangana, Karnataka and Goa to the south east to south west. The State has 36 districts which is divided into six revenue divisions– Amravati; Aurangabad; Konkan; Nagpur; Nashik; and Pune and these are divided into 109 sub-divisions, 357 talukas, 534 towns and 43,665 villages. The State has powerful local government institutions at the districts and local level. It includes 34 Zilla Parishads, 351 Panchayat Samitis, and 27,985 Gram Panchayats in rural areas; whereas urban areas are governed by 27 Municipal Corporations, 241 Municipal Councils, 128 Nagar Panchayats and 7 Cantonment Boards (Economic Survey 2019-20, GoM 2020).

Map 1.1 Administrative Divisions in Maharashtra





Maharashtra is the third largest State (9.4%) of India in terms of geographical area spread over 3.08 lakh sq.km. It has a long coastline stretching 720 kilometers along the Arabian Sea. On the basis of geographical features, the State is divided into three regions- Konkan (Coastal area), Sahyadri Hills (Western Ghats) and the Deccan Plateau. Krishna, Bhima, Godavari and Tapi-Purna are major basins in Deccan Plateau and major source of irrigation, drinking water and industrial use.

Around 70% of the State's geographical area lies in semi-arid region. Rainfall varies across the State, from Western Ghats and Coastal areas (2000 mm) to deccan plateau (600-700 mm). The State has 16.88% of total geographical area under forest followed by 11.26% of area not available for cultivation. The frequent droughts and natural constraints on irrigation development have played a major role in under utilization of land for cultivation. Only 55% of total geographical area in the State is under active cultivation (169.1 lakh ha in 2016-17; GOM 2020). The development of irrigation still remains one of the major concerns. The proportion of area under gross crop cultivation (17.9%) is still below the national average (49.03%) in 2015-16.

## 1.2 Demography

Maharashtra is the second most populous State in India as well as in world. Out of 231, only 10 countries (including India) have larger a population than Maharashtra. It constitutes 9.28% total population of India (2011) and has approximately 11.24 crore population, with a population density 365 per sq. km (Table 1.1). The population of the State has rapidly grown from 3.96 crore in 1961 to 11.24 crore in 2011, albeit some slowdown in rate of growth from 25.7% in 1980-91 to 16.01% in 2001-11. Sex ratio of the State has remained below the national average (943) and without much improvement, it has covered between 922 to 937 females per 1,000 males.

Maharashtra has shown a significant progress in the literacy mission. The State has consistently witnessed an upward trend in the literacy rates from 35.1% in 1961 to 82.3% in 2011. The gender and regional gaps in the literacy rates have also narrowed over the period of time. The gap between literacy rates of Males and Females have reduced from 29.5 to 12.51 percentage points during 1961 to 2011. The literacy rates for Males and Females have improved respectively from 49.3% and 19.8% in 1961 to 88.38% and 75.87% in 2011. Similarly, the gap between rural and urban literacy rates have reduced from 33.4 to 11.7 percentage during the corresponding periods. The literacy rates for rural and urban areas have increased respectively from 25.5% and 58.8% in 1961 to 77% and 88.7% in 2011.



**Table 1.1 Demographic Profile of Maharashtra: 1961 to 2011**

Sl. No.	Particulars	1961	1971	1981	1991	2001	2011
1.	Total Population (Crore)	3.96	5.04	6.28	7.89	9.69	11.24
	• Males (%)	51.65	51.81	51.63	51.72	52.02	51.83
	• Females (%)	48.35	48.19	48.37	48.28	47.98	48.17
	• Rural (%)	71.78	68.83	64.97	61.31	57.57	54.78
	• Urban (%)	28.22	31.17	35.03	38.69	42.43	45.22
	• Scheduled Castes (%)	5.63	6.30	7.14	11.09	10.20	11.81
	• Scheduled Tribes (%)	6.06	7.62	9.19	9.27	8.85	9.35
2.	Population Density (per sq. km)	129	164	204	257	315	365
3.	Literacy rate (%)	35.1	45.8	57.1	64.9	76.9	82.3
4.	Sex ratio (per thousand males)	936	930	937	934	922	929
5.	In-Migration - outside States (lakhs)	-	-	-	16.43	32.80	39.33
6.	Inter-district migration (lakhs)	-	-	-	31.47	50.55	72.67
7.	Intra-district migration (lakhs)	-	-	-	48.65	74.51	94.07
8.	Out Migration (lakhs)	-	-	-	7.70	8.97	12.52

Note: % are with respect to total population; literacy rates are with percentages to 6 & above age population; Source: Based on Economic Survey of Maharashtra 2019-20, Govt. of Maharashtra (2020)

Maharashtra is the third most urbanized state among the major states of India. The share of urban population has consistently shown upward trend from 28.22% in 1961 to 45.22% in 2011. This is clearly demonstrated by flow of migrants from other States as well as movement of population within district and between the districts of the State. The top five districts – Thane (9.8%), Pune (8.4%), Mumbai Sub-urban areas (8.3%), Nashik (5.8%) and Nagpur (4.1%) constitute 36.4% of total population in the State. Two districts-Mumbai and Mumbai (suburban) have 100% of their population in urban areas while two other districts, Gadchiroli and Sindhudurg, have less than 15% of their population living in urban areas. Greater Mumbai Urban Agglomeration (UA) is the largest Urban Agglomeration (UA) in the country in terms of population (1.84 crore). The six-urban agglomeration (UA)/ cities of Maharashtra - Greater Mumbai, Pune, Nagpur, Nashik, Vasai Virar city and Aurangabad, have more than one million (10 lakh) population.

The State has also a significant proportion of Schedule Castes (11.81%) and Schedule Tribes (9.35%) population (2011). Both the social groups have witnessed an increase in their proportion from 11.69% in 1961 to 21.16% in 2011.



### 1.3 Economy of State

Maharashtra is among the most economically developed states in the country. It is also a primary financial Centre and a largest industrial hub. India's major stock and commodity exchange markets and capital markets are located here. State is home to the Hindi, Bollywood, film industry, producing the largest number of films globally. Maharashtra has maintained the leading position in the industrial sector in the country. The State is a pioneer in small scale industries and has the largest number of special export promotion zones. Maharashtra also contributes about 10.4% to India's textiles and apparels output and about 25% in India's cotton production. The textile industry is the largest employer in the State and contributes around 28% to India's total exports. Gems and Jewelry is one of the key sectors of the State.

In terms of size of economy, the State constitutes 13.9% of all India's GDP and 19.3% of India's manufacturing GDP (2018-19). As on 2018-19, the size of Maharashtra's economy (GSDP at current prices) was 26.32 lakh crores, of which 22.95 lakh crores came from the value addition of all economic activities and the remaining (3.37 lakh crores) from net taxes (taxes less subsidies outgo). Out of 22.95 lakh crores, 13.72 lakh crore (59.7%) is generated in service sector followed by 6.97 lakh crore (30.4%) in industry and 2.27 lakh crore (9.9%) in agriculture and allied sectors (Table 1.2).

**Table 1.2 Maharashtra Economy at Glance: 1960-61 to 2018-19 (in Rs. '000' Crores)**

Sector & GSDP	1980-81	1990-91	2000-01	2010-11	2018-19
Agriculture & Allied Sector	4.45 (26.74)	14.20 (22.04)	38.38 (15.21)	129.34 (12.33)	226.57 (9.9)
Industry	5.99 (36.03)	22.49 (34.90)	69.78 (27.66)	311.59 (29.70)	697.33 (30.4)
Service	6.19 (37.23)	27.75 (43.06)	144.12 (57.13)	608.22 (57.97)	1371.48 (59.7)
<b>State Income</b>	<b>16.63</b>	<b>64.43</b>	<b>252.28</b>	<b>1049.15</b>	<b>2295.37</b>
Per capita State income (in Rs*)	3,112	8,811	28,540	84,858	2,16,376

Note: \* in '000' Crores; \* in absolute rupees (GSDP basis); \$ Sectoral and State Income at Gross Value-added basis; Figures in parenthesis are percentage to State income (GSDP/Gross Value Added) Source; Economic Survey of Maharashtra 2019-20; Government of Maharashtra



The State economy has grown significantly in the last four decades. This has translated into a rapid increase in per capita income of the State from Rs. 3,112 in 1980-81 to 2,16,376 in 2018-19 (Table 1.2). The overall growth of the economy, however, is led by outstanding performance of service sector along with support from industrial and agricultural sectors. The service sector shown a significant jump in its share particularly in 1980s and 1990s. The size of the sector in State GSDP has increased from 6.19 thousand crores in 1980-81 to 13.71 lakh crores in 2018-19. Similarly, the sector has created more employment opportunities for the working populations. This is clearly demonstrated by an increase in its employment share from 18.1% in 1981 to 27.7% in 2011 (Table 1.3). After service sector, industrial sector remains the major income and employment generating sector in the State. The sector after losing a growth momentum in the 1990s, has started showing some signs of revival in 2000s and 2010s. The GSDP from industrial sector has grown from 5.99 thousand crores in 1980-81 to 6.97 lakh crores in 2018-19.

The agricultural sector, nevertheless, has remained the largest employer in Maharashtra. Despite of a consistent decline in its share in State GSDP (26.74% to 9.9% during 1980-81 to 2018-19), the sector still provides employment to more than 46% of its working population (Table 1.3).

**Table 1.3 Distribution of Total Workers across the Sectors in Maharashtra: (1981 to 2011)**

Sl. No.	Major Sectors	Percentage to Total			
		1981	1991	2001	2011
I	<b>Main workers*</b>	<b>91.0</b>	<b>91.4</b>	<b>84.3</b>	<b>88.5</b>
	<b>i) Agricultural Sector</b>	<b>57.9</b>	<b>55.9</b>	<b>45.1</b>	<b>46.1</b>
	• Cultivators (Farmers)	31.9	30.0	24.8	23.2
	• Agricultural labourers and fishing	26	25.9	20.3	22.9
	<b>ii) Non-agricultural sectors</b>	<b>33.1</b>	<b>35.5</b>	<b>39.2</b>	<b>42.5</b>
	• Mining and Quarrying	0.3	0.3	0.4	0.2
	• Manufacturing	12.7	12.1	11.0	10.5
	• Construction	2.0	2.4	3.4	4.1
	• Trade	6.5	7.8	7.1	6.4
	• Transport, Storage and Communication	3.0	3.4	4.3	5.8
	• Other	8.6	9.5	13.0	15.5
II	<b>Marginal Workers**</b>	<b>9.0</b>	<b>8.6</b>	<b>15.7</b>	<b>11.5</b>
	<b>Total Workers (Figures in bracket in Crore)</b>	<b>100 (2.67)</b>	<b>100 (3.39)</b>	<b>100 (4.12)</b>	<b>100 (4.94)</b>

Note: \*Main Workers (more than 180 days of work); \*\*Marginal (less than 180 days of work); Household & Non-Household Industry;

Source: Economic Survey of Maharashtra, 2019-20, Government of Maharashtra.



The economic performance of State is well supported by a huge investment in infrastructural activities. Maharashtra has witnessed a substantial increase in the number of industrial clusters and Public Private Partnership (PPP) projects. Maharashtra Industrial Development Corporation (MIDC), CIDCO and Software Technology Park of India have taken a various initiative for developing public and private IT Parks (37 & 506 respectively) with a significant investment (Rs.17,566 crores) and employment opportunities to 17.10 lakh people. As of January 22, 2019, the State had 29 exports SEZs for textiles and apparel, food processing, footwear and leather products, multi-product, pharma, biotechnology & IT sectors. The prime IT /ITeS clusters are located in Greater Mumbai, Pune, Thane, and Nasik. Pune, in fact, leads Business Process Outsourcing (BPO) services in the country.

The infrastructural support is well supported by changing business atmosphere by adopting varied measures to increase 'Ease of Doing Business'. The recently launched Start-up policy is being held as pioneering by the innovative and creative industry, which aims at giving institutional and intellectual support to the new budding entrepreneurs. Most of the initiatives have made the State as top destination for investment in technological advancement, manpower, increase in connectivity and effective utilization of natural resources. Total FDI in the State during April 2000 to December 2018 stood at US\$ 123.73 billion, the highest among all states in India.

#### **1.4 Status of Higher Education in Maharashtra**

Higher education in Maharashtra has grown and expanded manifold after the independence. At present, hardly there is any block/taluka, which does not have the institutional facility of higher education. The growth rate of colleges has been phenomenal after the adoption of privatization since 1982. The privatization of higher education paved way for spurt in self-financed professional and non-professional colleges as well as Deemed Universities. Nevertheless, majority of colleges and institutions of higher learning in the State are still affiliated to State Public Universities. Around 80% of youth in higher education are registered under affiliating college system.

There are 64 functional universities in the Maharashtra (Table 1.4). These include 22 State Public Universities, 21 Deemed Universities, 11 State Private Universities, 8 Institutions of National Importance, and one each from Central and State Open University. Among the 21 Deemed Universities, 9 Universities are supported by government through grant-in-aid; whereas the remaining 11 universities are totally self-financed (private-unaided). The State Public Universities offering varieties of educational programmes across all disciplines (General) such as Arts, Commerce & Management, Science, Law, Engineering & Technology, Humanities, Educational and vocational form the backbone of the higher education in Maharashtra. These 11 Universities serve to major chunk of students (80%).



The State has specialized public universities for Agriculture (4), Law (3), Medical (1), Technical (1) and Veterinary (1). Some of these universities are quite renowned for innovative practices, product development, and disease & epidemic controls. Deemed Universities have come up in a big way to cater market and science-oriented medical, technical and professional educational programs. These included the universities offering Medical & Health Care (7), General & Social Sciences (5), Science & Technology (4), Economics (2), Fisheries (1), Population Research (1), and Archeology & Indic Studies (1).

**Table 1.4 Universities by Types in Maharashtra (as on March 2020)**

Sl. No.	University Type	Number of Universities as per AISHE 2020
1	State Public University	22
	• General	12
	• Agriculture	4
	• Law	3
	• Medical	1
	• Technical	1
	• Veterinary	1
2	State Open University	1
3	State Private University	11
4	Deemed University	21
	• Private	12
	• Government & Govt. Aided	9
	a. Medical/Health Sciences	7
	b. Science & Technology	4
	c. General & Social Sciences	5
	d. Economics	2
	e. Indic/archeology	1
	f. Fisheries	1
	g. Population Research	1
5	Central University	1
6	Institutions of National Importance	8
<b>Grand Total</b>		<b>64*</b>

Note: \* excludes 4 recently notified, but not yet functional universities

Source: Annual Survey of Higher Education, 2020, University Grants Commission, 2020; information accessed from <https://rb.gy/fv34q3> on 30th May 2020. & Directorate of Higher Education, Government of Maharashtra.



There are 4780 colleges in Maharashtra (Table 1.5). These included 4468 (93.47%) affiliated colleges, 164 (3.43%) constituents (run by universities), 10 off-campus centres and 138 (2.89%) recognised centres. These colleges are largely affiliated to or run by the State Public Universities (97.76%) followed by Deemed Universities (2.02%). The affiliated colleges are largely managed by private (89.3%) trust/institutions, either self-financed colleges (63.32%) or receiving grant-in-aid (25.98%) from the State (Table 1.6). Only 10.43% of total affiliated colleges are administered by Central Government (17), State Government (111), Local Bodies (286) and Universities (52). Most of the constituent colleges come under Deemed Universities (54.9%) and State Public Universities (43.21%) and largely governed by the University administration and private institutions. Out of 164 constituent colleges, only 21 colleges are directly administered by various departments of Central & State Governments and Local Bodies. Around 92.77% of total recognised centres in Maharashtra are managed by the private institutions, but almost all of the centres operated under State Public Universities.

**Table 1.5 Number of Colleges by the Types of Universities in Maharashtra in 2019-20**

	University-Type	Affiliated College	Constituent / University College	Off-Campus Centre	Recognized Centre	Total
Number	State Public University	4464	71	2	136	4673
	Central University	1	3	-	1	5
	Deemed University	-	90	7	-	97
	• Government	-	2	2	-	4
	• Govt.-aided	-	-	1	-	1
	• Private	-	88	4	-	92
	Institutions of National Importance	-	-	1	-	1
	State Public University-Open	3	-	-	1	4
	<b>Total</b>	<b>4468</b>	<b>164</b>	<b>10</b>	<b>138</b>	<b>4780</b>
Percentages to Total	State Public University	99.91	43.29	20.00	98.55	97.76
	Central University	0.02	1.83	-	0.72	0.10
	Deemed University	-	54.88	70.00	-	2.02
	• Government	-	1.22	20.00	-	0.08
	• Govt.-aided	-	-	10.00	-	0.02
	• Private	-	53.66	40.00	-	1.92
	Institutions of National Importance	-	-	10.00	-	0.02
	State Public University-Open	0.07	-	-	0.72	0.08
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: UGC (2020), AISHE 2020, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>



Table 1.6 Number of Colleges by Types of Management in Maharashtra in 2019-20

	Management	Affiliated College	Constituent / University College	Off-Campus Centre	Recognized Centre	Total
Number	Central Government	17	4	2	3	26
	State Government	111	16	-	1	128
	Local Body	286	1	-	1	288
	University	52	93	8	1	154
	Private Aided	1161	6	-	4	1171
	Private Un-aided	2829	44	-	128	3001
	Not Specified	12	-	-	-	12
	<b>Total</b>	<b>4468</b>	<b>164</b>	<b>10</b>	<b>138</b>	<b>4780</b>
Percentages to Total	Central Government	0.38	2.44	20.00	2.17	0.54
	State Government	2.48	9.76	-	0.72	2.68
	Local Body	6.40	0.61	-	0.72	6.03
	University	1.16	56.71	80.00	0.72	3.22
	Private Aided	25.98	3.66	-	2.90	24.50
	Private Un-aided	63.32	26.83	-	92.75	62.78
	Not Specified	0.27	-	-	-	0.25
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: UGC (2020), AISHE 2020, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>

The State has also 2392 Standalone (not affiliated, but recognized) colleges (Table 1.7). A significant proportion of them are self-financed (private un-aided) colleges (76.71%) followed by Govt. & local bodies (12.25%) and private grant-in-aid colleges (7.85%). These colleges offer varieties of specialized programmes. Around 96.6% of total standalone colleges offered Teachers Training (40.1%), Technical/Polytechnical (31.1%) and Nursing (25.4%) programmes. A very few colleges offered PG Diploma in Management (2.7%), and Hotel Management & Catering (0.1%) etc.,

**Table 1.7 Standalone Colleges by the Types and Management in Maharashtra in 2019-20**

Particulars	Type of Standalone Colleges	Central Govt.	Local Body	Private Aided	Private Un-aided	State Govt.	Not Specified	Total
Number of Colleges	Hotel Management and Catering	1	-	-	-	-	1	2
	Institutes under Ministries	4	-	-	7	-	3	14
	Nursing	1	25	32	483	40	26	607
	PGDM Institutes	1	1	2	52	-	9	65
	Teacher Training	1	76	113	678	70	21	959
	Technical/Polytechnic	2	22	41	615	49	16	745
	<b>Total</b>		<b>10</b>	<b>124</b>	<b>188</b>	<b>1835</b>	<b>159</b>	<b>76</b>
Percentage to Total	Hotel Management and Catering	10.0	-	-	-	-	1.3	0.1
	Institutes under Ministries	40.0	-	-	0.4	-	3.9	0.6
	Nursing	10.0	20.2	17.0	26.3	25.2	34.2	25.4
	PGDM Institutes	10.0	0.8	1.1	2.8	-	11.8	2.7
	Teacher Training	10.0	61.3	60.1	36.9	44.0	27.6	40.1
	Technical/Polytechnic	20.0	17.7	21.8	33.5	30.8	21.1	31.1
	<b>Total</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: UGC (2020), AISHE 2020, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>

The distribution of colleges is highly skewed towards a few universities and regions in Maharashtra (Table 1.8). The top 8 universities accounted for almost 78.6% of total colleges & centres (4780) in the State. Notably, one third of total colleges & centres are affiliated to or run by University of Mumbai and Savithibai Phule Pune University in Maharashtra. Rashtrasant Tukadoji Maharaj Nagpur University (474), Dr. Babasaheb Ambedkar Marathwada University, (430), Maharashtra University of Health Sciences (358), Sant Gadge Baba Amravati University (314), Shivaji University (296), and S.R.T. Marathwada University (272) constituted around 45% (2124) of total colleges & centres. Out of 64 universities in the State, 56 universities have only 21.4% of the colleges & centres under them. The 21 Deemed Universities have only 2% of total colleges (mainly constituent colleges or PG Centres) and that too largely managed by SYMBIOSIS International University, Pune (31), Bharati Vidyapeeth, Pune (27), Dr. D.Y. Patil Vidyapeeth, Pune (10) and MGM Institute of Health Sciences, Mumbai (9).



Table 1.8 Number of Colleges in Maharashtra in 2019-20

	Name of the University	Affiliated Colleges	University Colleges	PG Centre	Recognized Centre	Total
State Public University	University of Mumbai	799	2	-	7	808
	Savitribai Phule Pune University	674	-	-	129	803
	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	472	2	-	-	474
	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	428	2	-	-	430
	Maharashtra University of Health Sciences, Nashik	358	-	-	-	358
	Sant Gadge Baba Amravati University, Amravati	313	1	-	-	314
	Shivaji University, Kolhapur	296	-	-	-	296
	S.R.T. Marathwada University, Nanded	270	1	1	-	272
	Gondwana University, Gadchiroli	175	-	-	-	175
	K.B.C. North Maharashtra University, Jalgaon	173	-	1	-	174
	S.N.D.T. Women's Univeristy Mumbai	128	15	-	-	143
	Punyashlok Ahilyadevi Holkar Solapur University, Solapur	93	-	-	-	93
	Dr. Babasaheb Ambedkar Technological University, Lonere	75	-	-	-	75
	Mahatma Phule Krishi Vidyapeeth, Rahuri	63	10	-	-	73
	Kavi Kulguru Kalidas Sanskrit Vishwavidyalaya, Ramtek	60	1	-	-	61
	Marathwada Agricultural University, Parbhani	38	12	-	-	50
	Dr. Punjarao Deshmukh Krishi Vidyapeeth, Akola	28	9	-	-	37
	Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Ratnagiri	21	6	-	-	27
Maharashtra Animal & Fishery Sciences University, Nagpur	-	10	-	-	10	



Deemed University	SYMBIOSIS International University, Pune	-	27	4	-	31
	Bharati Vidyapeeth, Pune	-	27	-	-	27
	Dr. D.Y. Patil Vidyapeeth, Pune	-	10	-	-	10
	MGM Institute of Health Sciences, Mumbai	-	9	-	-	9
	Other Deemed Universities*	-	17	3	-	20
	<b>Central University</b>	1	3	-	1	5
	<b>Others**</b>	3	-	1	1	5
	<b>Total Colleges in Maharashtra</b>	<b>4468</b>	<b>164</b>	<b>10</b>	<b>138</b>	<b>4780</b>

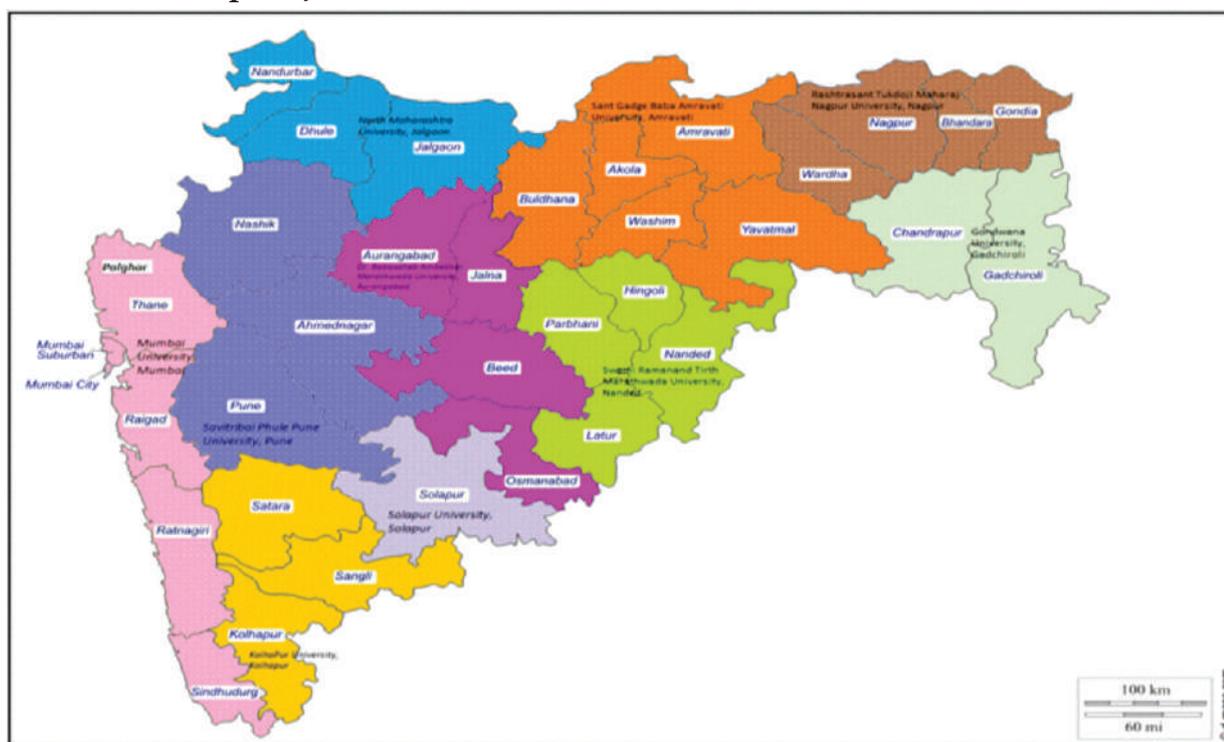
Note: \*Other Deemed Universities included Krishna Institute of Medical Sciences Deemed University, Karad (6), Pravara Institute of Medical Sciences, Ahmednagar (6), D.Y. Patil Educational Society, Kolhapur (3), Homi Bhabha National Institute, Mumbai (2), Rashtriya Sanskrit Sansthan, New Delhi (1), Tata Institute of Fundamental Research, Mumbai (1) and Tata Institute of Social Sciences, Mumbai (1); \*\*Public Universities from Other States (3 Affiliated Colleges & \*\*one PG Centre/Off-Campus Centre of Institutes of National Importance.

Source: UGC (2020), AISHE 2020, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>

Around 91.8% of total colleges & centres are managed by 12 State Public Universities in the State (Table 1.8 and Map 1.2) and a significant proportion of them (60%) are private un-aided (self-financed) colleges (Table 1.9). The universities with relatively higher concentration of self-financed affiliated colleges included Kavi Kulguru Sanskrit Vishwavidyalaya, Ramtek (100%), Shreemati Nathibai Damodar Thakersey (S.N.D.T.) Women's University, Mumbai (85%), Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (67%), Mumbai University, Mumbai (65.6%), Gondwana University, Gadchiroli (64.1%), Savitribai Phule Pune University, Pune (63.6%), Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur (62.4%), and Swami Ramanand Teerth Marathwada University, Nanded (60.5%). There are a few government colleges (28) in the State and 90% of them are affiliated to the public universities located in Mumbai, Aurangabad, Nagpur and Amaravati. Nevertheless, there are 1177 private affiliated colleges (38.7%) depend upon grant-in-aid from the State. Except, Kavi Kulguru Sanskrit Vishwavidyalaya, Ramtek, colleges affiliated to other Public Universities have benefited from the State financial support. The colleges affiliated to Shivaji University, Kolhapur (62.6%), Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon (59.1%), Solapur University, Solapur (56.5%) and Sant Gadge Baba Amravati University, Amravati (54.3%), however, have relatively higher proportions of government-aided affiliated colleges as compared to the others.



Map 1.2 Jurisdiction of State Public Universities in Maharashtra



Note: SNTD Women's University has jurisdiction of entire Maharashtra State

Table 1.9 Distribution of Colleges Affiliated to State Universities

Sl. No.	University Name	Percentage to Total			Total (Number)
		Aided	Govt.	Non-aided	
1	Mumbai University, Mumbai	32.6	1.8	65.6	561
2	Savitribai Phule Pune University, Pune	36.4	-	63.6	450
3	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	31.3	1.4	67.3	364
4	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	36.5	1.1	62.4	362
5	Sant Gadge Baba Amravati University Amravati	54.3	1.4	44.2	278
6	S.R.T. Marathwada University, Nanded	38.7	0.8	60.5	253
7	Shivaji University, Kolhapur	62.6	0.9	36.5	211
8	Gondwana University, Gadchiroli	35.4	0.6	64.1	181
9	S.N.D.T. Women's University, Mumbai	14.3	-	85.7	140
10	K.B.C. North Maharashtra University, Jalgaon	59.1	-	40.9	132



11	Solapur University, Solapur	56.5	-	43.5	69
12	Kavi Kulguru Sanskrit Vishwavidyalaya, Ramtek	-	-	100.0	38
<b>All</b>		<b>38.7</b>	<b>0.9</b>	<b>60.4</b>	<b>3041*</b>

Note: There are 4179 affiliated colleges under the above 12 universities. Out of that 3041 colleges are under Directorate of Higher Education (General Education, Government of Maharashtra). Among these 3041 colleges 28 are Govt. Colleges, 1177 are Aided colleges and remaining 1836 are Non-aided Private colleges.

The distribution of total colleges & centres, total affiliated colleges and Standalone colleges across districts of Maharashtra is presented in the Fig. 1.1 to Fig. 1.3. All the three figures clearly demonstrate that almost all the districts in the State have a good number of colleges albeit a significant concentration in a few districts. The number of total colleges & centres ranges from 32 (Hingoli) to 624 (Pune). Similarly, total number of standalone colleges ranged from 6 (Palghar) to 203 (Pune), indicating expansion of higher education institutions across all the regions/districts in the State. The concentration of higher education institutions is largely found in Pune, Nagpur, Mumbai, Thane, Aurangabad, Nashik and Ahmednagar districts, constituting almost 45% of the total colleges & centres, and 42% of total affiliated colleges in the State. Pune district alone accounted for 13% of total colleges & centres, 10% of total affiliated colleges and 8.49% of total Standalone colleges in the State.

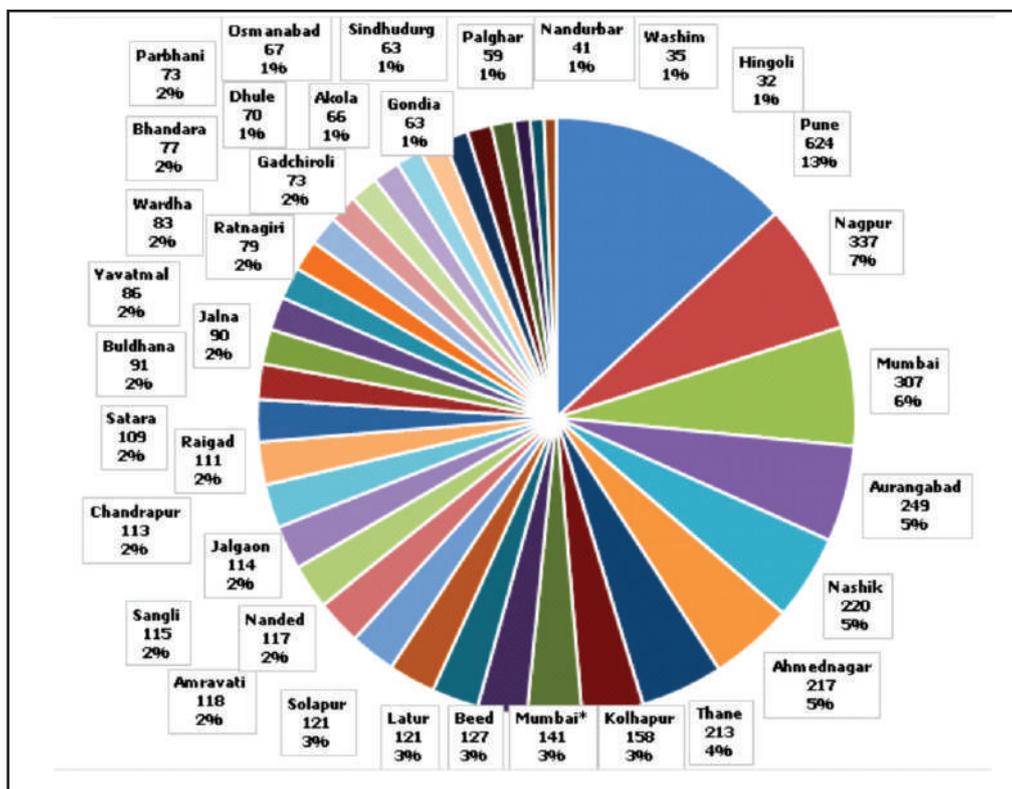


Fig. 1.1: Total Number of Colleges & Centres across Districts in Maharashtra in 2019-20



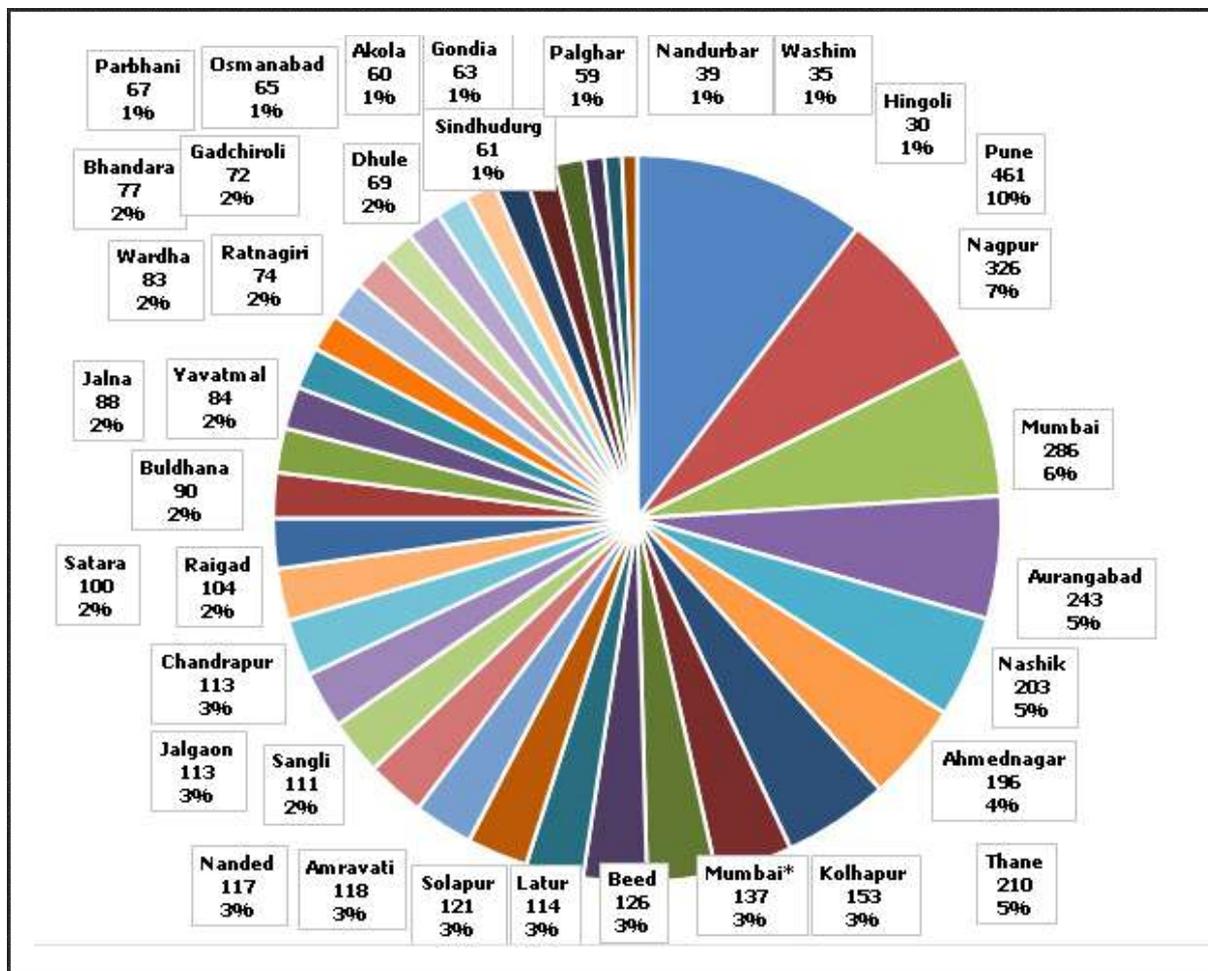


Fig. 1.2: Total Number of Affiliated Colleges across Districts in Maharashtra in 2019-20

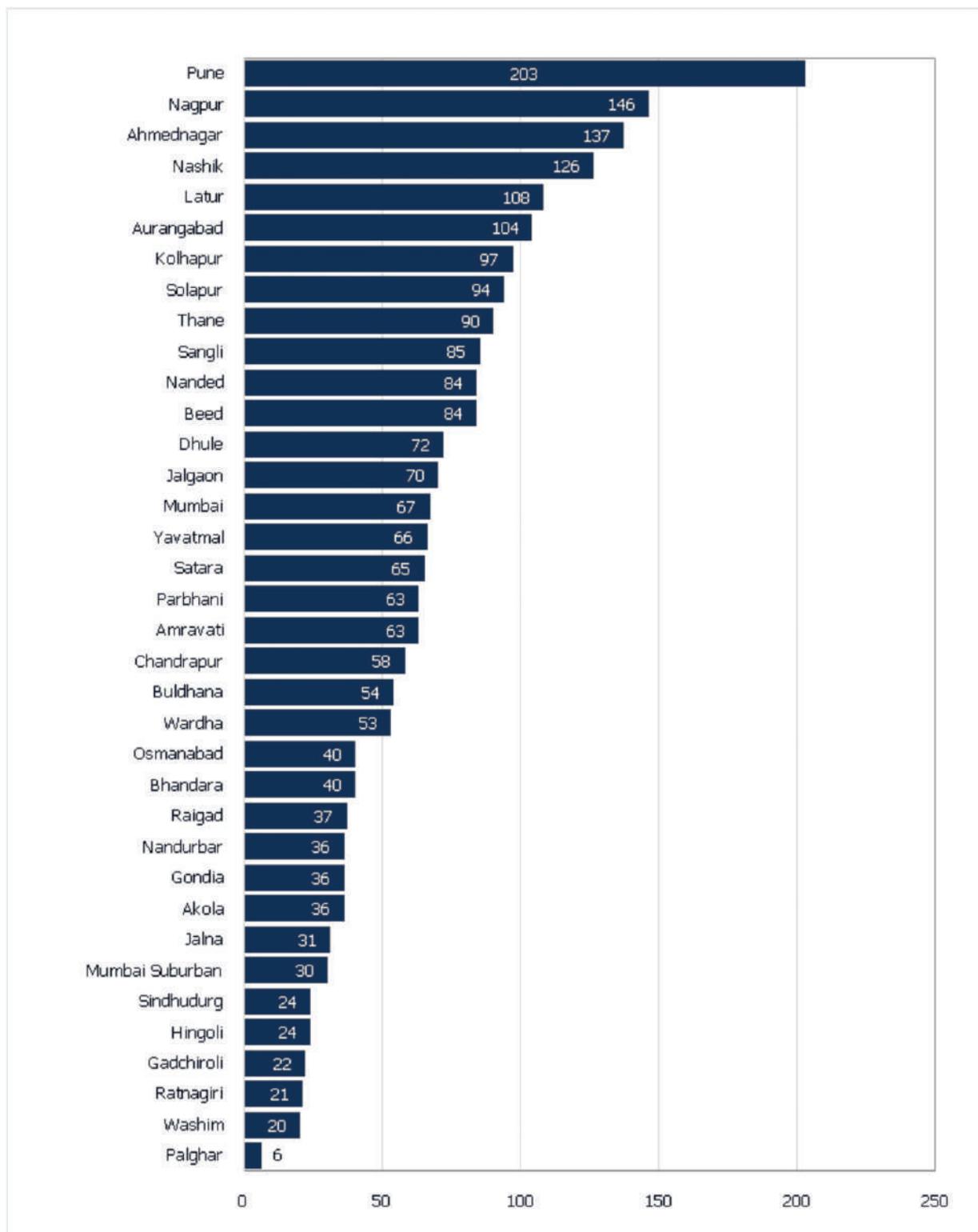


Fig. 1.3: Distribution of Standalone Colleges across the Districts in Maharashtra 2019-20

Source: UGC (2020), AISHE portal, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>



## 1.5 Scenario of Higher Education

Maharashtra has witnessed a significant increase in the number of universities and colleges over the period of time (Fig. 1.4 & Table 1.10). The number of universities in the last 9 years has risen from 44 (2011-12) to 68 (2019-20). The jump in the number of universities during the last five years, however, is quite notable. The number of colleges in the State has steadily increased from merely 78 in 1947 to 4780 in 2020. Most of new colleges, around 81% (3871) of the total colleges (4780), were set up in the last three decades (1988 to 2020). The participation of private institutions has led to a significant expansion in the number of colleges particularly in a few districts of the State (Fig.1.5). The districts such as Pune, Mumbai and Nagpur have higher concentration of colleges as against some of the districts in Marathwada and Vidarbha regions.

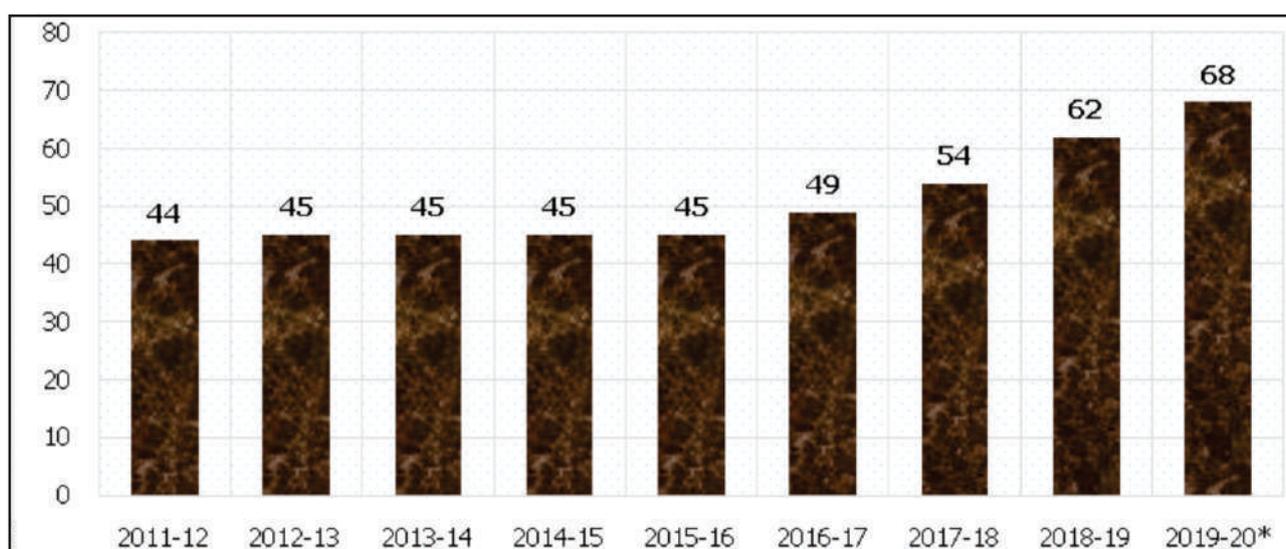


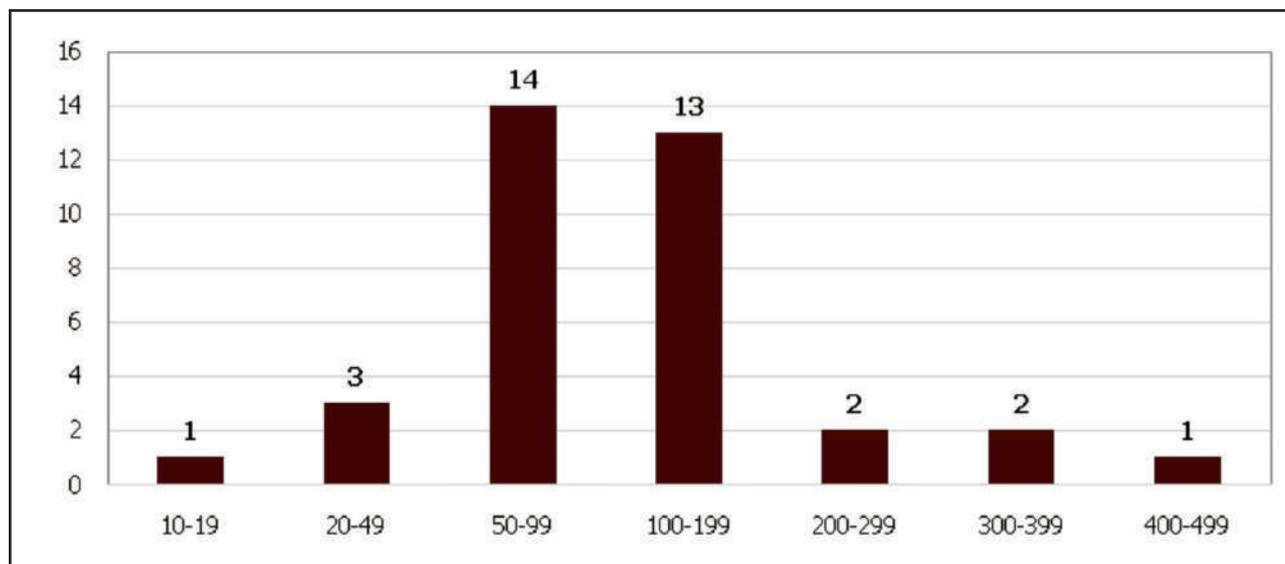
Fig. 1.4: Number of Universities in Maharashtra (2011 to 2020)

Note: \* includes 4 notified but not yet functional universities; Source: AISHE-2018-19

Table 1.10 Decennial Growth of Colleges in Maharashtra

Year	New addition	Cumulative Total
Up to 1947	78	78
1948 - 1957	59	137
1958 - 1967	203	340
1968 - 1977	249	589
1978 - 1987	320	909
1988 - 1997	706	1615
1998 - 2007	1296	2911
2008 - 2016	1392	4303
2017 - 2019	477	4780
<b>Total</b>	-	<b>4780</b>

Source: UGC (2020), AISHE portal, accessed on 30<sup>th</sup> May 2020 from <https://rb.gy/fv34q3>



**Fig. 1.5: Distribution of Districts between College Groups in Maharashtra**

Source: AISHE, 2018-19

Maharashtra has around 1.32 crore population between the age group 18-23, consisting 69.36 lakh males and 32.96 lakh female population in 2018-19 (Table 1.11). Within the age group, around 32% of the young population is enrolled in higher education institutions in the State (Table 1.12). Even though the gross enrolment ratios for both male and female population are above the national averages (26.3%), it is still low as compared to Sikkim (53.9%), Tamil Nadu (49%), Himachal Pradesh (39.6%), Uttarakhand (39.1%), Kerala (37%) and Telangana (36.2%). The enrolment ratios, however, for both male and female are steadily increasing and the gap between male and female ratios has almost narrowed to 1% point from 4.4% during the last five years. The improvement in gross enrollment ratios, nevertheless, need a relook at the backdrop of decline in the age group population and increasing trends of in-migration of students for higher education in the State.

**Table 1.11 Population between Age Group 18-23 in Maharashtra (in Lakhs)**

Year	All Categories			SC			ST		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2014-15	70.68	63.07	133.75	8.61	7.94	16.55	6.16	6.17	12.33
2015-16	70.36	63.05	133.41	8.57	7.94	16.51	6.13	6.17	12.30
2016-17	70.03	63.03	133.06	8.53	7.94	16.47	6.11	6.17	12.27
2017-18	69.70	63.00	132.70	8.49	7.93	16.42	6.08	6.16	12.24
2018-19	69.36	62.96	132.32	8.45	7.93	16.38	6.05	6.16	12.21

Source: AISHE Reports 2014-15 to 2018-19.

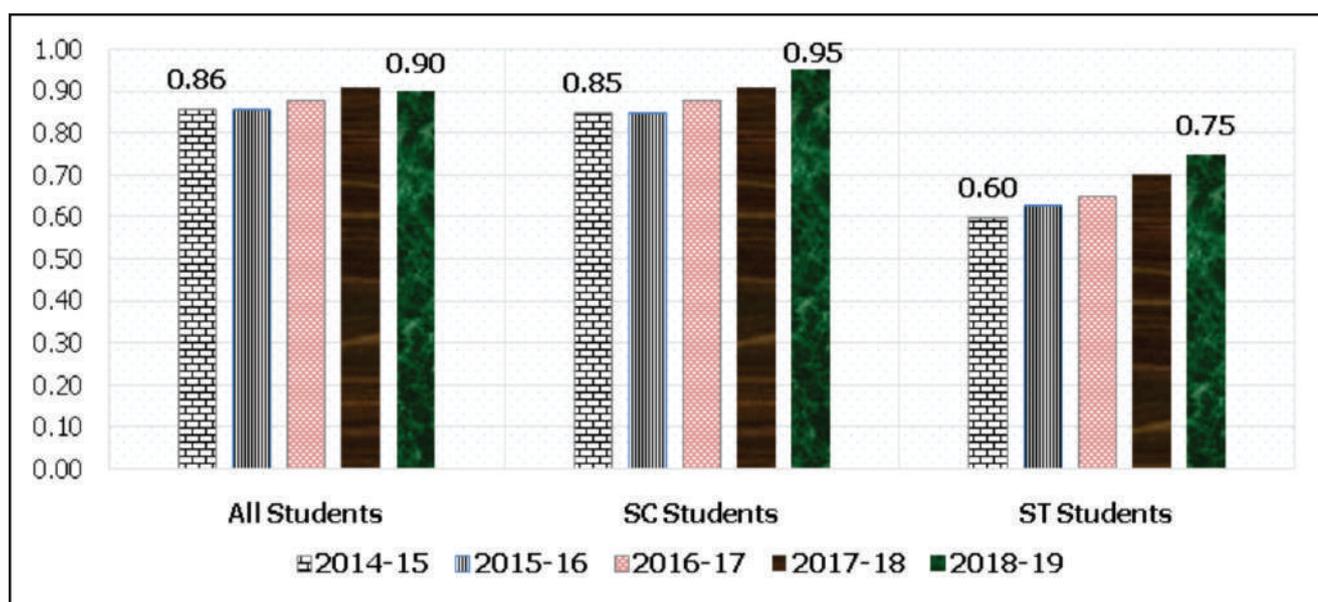


**Table 1.12 Gross Enrolment Ratio in Higher Education between Age Group 18-23 in Maharashtra(%)**

Year	All Categories			SC			ST		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2014-15	30.0	25.6	27.9	27.6	23.4	25.6	15.7	9.5	12.6
2015-16	31.9	27.6	29.9	31.9	27.0	29.6	18.1	11.4	14.7
2016-17	32.0	28.2	30.2	31.9	28.1	30.1	17.9	11.7	14.8
2017-18	32.6	29.5	31.1	32.0	29.2	30.6	17.8	12.5	15.1
2018-19	33.5	30.3	32.0	31.9	30.4	31.2	17.4	13.0	15.2

Source: AISHE Reports 2014-15 to 2018-19.

Within age group 18-23, Scheduled castes (SC) and Scheduled Tribes (ST) constituted 16.38 and 12.21 lakhs respectively in 2018-19. In terms of percentages share, SC accounted for 12.37% of total population within the age group, whereas, ST formed 9.23%. As far as their gross enrolment ratios are concerned, these have marginally lower for SCs (31.2%), but significantly low for STs (15.2%). The gender parity indices (of enrolment ratios) of all students including those of SC and ST, have been narrowing over the last five years. However, the index still remains low for ST students (Fig. 1.6).

**Fig. 1.6: Gender Parity Index for Higher Education (Age group (18-23) in Maharashtra**

Source: AISHE Reports 2014-15 to 2018-19.

The private educational institutions dominate the higher education sector in Maharashtra both in terms of number of colleges (3589) and enrolment (25.24 lakhs) of students (Table 1.13). Around 83% of total colleges are run by the private institutions and these serves

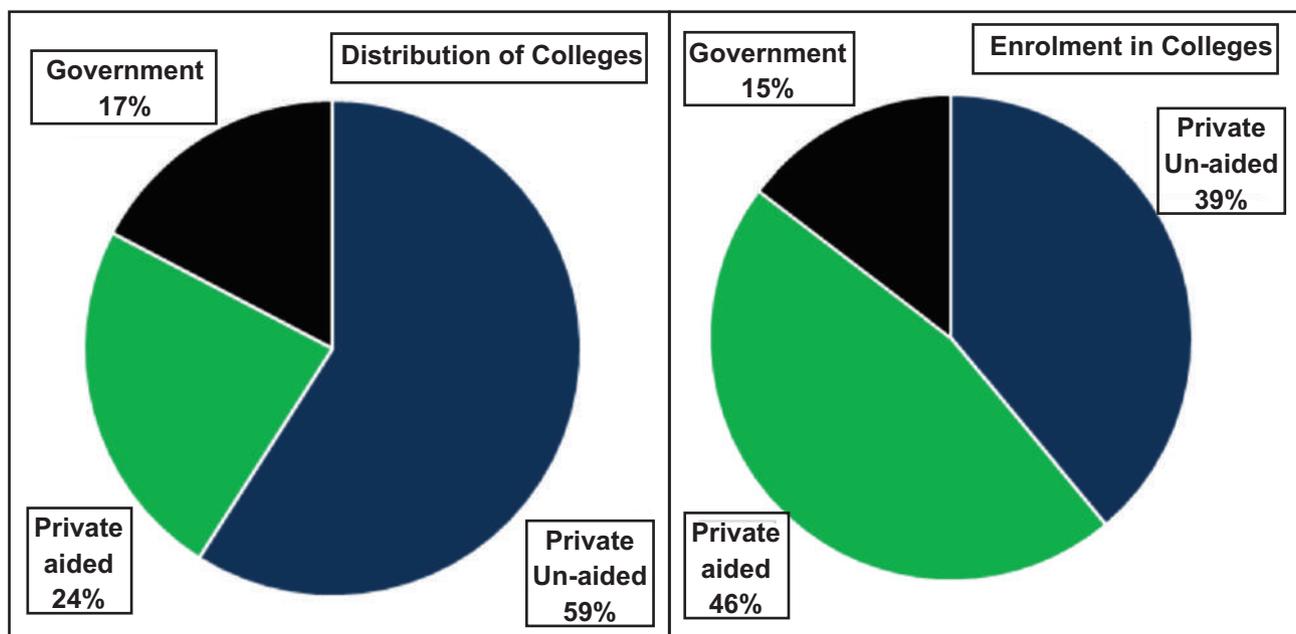


almost 85% of total enrolled students (Fig. 1.7). A large number of these institutions are self-financed, accounting for 71.46% of total private colleges and nearly 59% of total colleges in the State. Even though private self-financed colleges shown a significant presence in term of their number, but government-aided colleges, took a lead in overall enrollment of students. Around 13.72 lakh students were enrolled in 1027 government-aided colleges as compared 11.52 lakh students in 2562 private self-financed colleges.

**Table 1.13 Number of Colleges and Enrolment in Private and Government Colleges (based on actual response) in Maharashtra**

Years	Number of Colleges				Enrollment (in lakhs)			
	Private Un-aided	Private Aided	Govt.	Total	Private Un-aided	Private Aided	Govt.	Total
2014-15	2766	932	833	4531	10.53	10.47	5.76	26.76
2015-16	2649	950	830	4429	10.94	11.09	5.78	27.82
2016-17	2268	982	816	4066	10.26	11.99	5.43	27.68
2017-18	2463	978	853	4294	10.90	12.45	5.75	29.10
2018-19	2562	1027	751	4340	11.52	13.72	4.34	29.57

Source: AISHE Reports 2014-15 to 2018-19.



**Fig. 1.7 Distribution of Colleges and Enrolments in Maharashtra: 2018-19**

Source: AISHE-2018-19



The Government and Government-aided colleges constituted 41.29% (1778) of total colleges and 61% of total enrolments. The decline in the number of colleges, particularly in private unaided (self-financed) colleges indicate rationalization of colleges as no corresponding increase in the students is witnessed in these colleges. In fact, the government-aided colleges have seen a consistent increase in enrollment of students as well the number of colleges in the State.

The distribution pattern of enrollment of students through distance & regular mode and regular mode is presented in Table 1.14. The highest number of enrollment of students in the colleges is observed at undergraduate level, followed by postgraduate and diploma programmes. Around 18.56 lakh male and 14.96 lakh female students were enrolled in undergraduate programmes. The total enrolment in post graduate level was 4.61 lakhs, whereas there were only 11,000 students enrolled in M.Phil and Ph.D programmes. The pattern of student enrollment remains more or less same across programmes through distance & regular mode.

**Table 1.14 Enrolment at Various Levels through Different Modes in Maharashtra (in Lakh)**

Sl. No.	Level / Enrollment	Enrollment (Regular & Distance Mode)			Enrolment (Regular Mode)		
		Male	Female	Total	Male	Female	Total
1	Ph.D	0.05	0.04	0.09	0.05	0.04	0.09
2	M.Phil	0.01	0.01	0.02	0.01	0.01	0.02
3	Postgraduate	2.19	2.43	4.61	1.78	2.06	3.83
4	Undergraduate	18.56	14.96	33.52	15.04	13.21	28.25
5	PG Diploma	0.11	0.09	0.20	0.08	0.06	0.15
6	Diploma	2.16	1.39	3.55	1.99	1.30	3.29
7	Certificate	0.10	0.08	0.18	0.06	0.06	0.12
8	Integrated	0.07	0.06	0.14	0.07	0.06	0.14
<b>Grand Total</b>		<b>23.24</b>	<b>19.06</b>	<b>42.30</b>	<b>19.09</b>	<b>16.81</b>	<b>35.89</b>

Source: AISHE-2018-19



**Table 1.15 Enrolment by Types of University Teaching Departments and its Constituent Units/Off-campus Centres in Maharashtra (Number in '000') in 2018-19**

Sl. No.	Types University	Male	Female	Total	% to
1	Central University	6.31	4.89	11.20	1.18
2	Central Open University	17.96	11.39	29.35	3.09
3	Institutions of National Importance	7.97	2.60	10.57	1.11
4	State Public University	98.42	103.77	202.19	21.31
5	State Open University	379.61	194.90	574.50	60.54
6	State Private University	14.51	7.22	21.73	2.29
7	Deemed University	53.26	46.14	99.42	10.48
	• Government	2.74	1.39	4.14	0.44
	• Government-aided	1.79	2.50	4.29	0.45
	• Private	48.73	42.25	90.99	9.59
8	State Private Open University	-	-	-	-
<b>Grand Total</b>		<b>578.05</b>	<b>370.91</b>	<b>948.96</b>	<b>100.00</b>

Source: AISHE-2018-19

The enrolment at university teaching departments and its constituent units/off campus centres indicate the student's preferences for higher education studies (Table 1.15). The State Public Open University, in the regards, recorded highest number of enrolment (5.74 lakhs, 60% of total), followed by State Public Universities (21.31%), Deemed Universities (10.48%), Central Open University (3.09%), State Private Universities (2.29%), Central University (1.18%) and Institutions of National Importance (1.11%) etc.,

The representation of teachers from different social groups is essential for inclusive and socially cohesive societies. The affirmative policies of the State have been quite promising and successful in bridging gender and social disparities. There has been a significant improvement in representation of teachers from OBC, SC and Other minorities communities (Table 1.16). The participation of women has also been encouraging, but gender disparities is still wide across the social groups. Maharashtra has 1.59 lakh teachers from different social groups employed in higher education. More than half of total teachers in higher education belongs to general group followed by OBC (22.45%), SC (11.39%), Minorities other than Muslim (7.55%), Muslim (4.86%), ST (1.52%), and persons with disabilities, PWD (0.32%).



**Table 1.16 Total Number of Teachers among Different Social Groups in Maharashtra**

Particulars	Gender	General	OBC	SC	Muslim	Other Minorities	ST	PWD	Total
Number of Teachers	Male	46,667	22,594	11,855	4,649	6,580	1,744	376	94,465
	Female	35,835	13,095	6,251	3,083	5,414	669	127	64,474
	<b>Total</b>	<b>82,502</b>	<b>35,689</b>	<b>18,106</b>	<b>7,732</b>	<b>11,994</b>	<b>2,413</b>	<b>503</b>	<b>158,939</b>
% to Total	Male	49.39	23.92	12.55	4.92	6.97	1.85	0.40	100
	Female	55.57	20.31	9.70	4.78	8.40	1.04	0.20	100
	<b>Total</b>	<b>51.91</b>	<b>22.45</b>	<b>11.39</b>	<b>4.86</b>	<b>7.55</b>	<b>1.52</b>	<b>0.32</b>	<b>100</b>
<b>GDR</b>	1.90	2.61	1.73	2.96	1.51	1.22	1.30	1.47	1.90

Note: GDR: Gender Disparity (male/female) ratio (1= parity less or more than 1 disparity)

Source: AISHE-2018-19

The post-wise breakup of teachers working in higher education in Maharashtra is presented in table 1.17. More than two third of the teachers in the State are lectures or assistant professor, followed by readers/associate professor (11.92%), and professors & equivalent (8.56%). There are around 12,600 visiting and temporary teachers in the State and constitute 7.93% of total teachers. The gender disparities are quite stark in professor and reader or associate professor positions. There are more than 2 males per female faculty in these positions.

Table 1.18 represents information only on number of teachers in universities' teaching departments and its constituent units/off-campus centres. The proportion of lectures and assistant professor even though lower than general strength of teachers in higher education, still remains higher (54.85%) in universities teaching department & its constituent units and off-campus centres. Notably, the proportions of professors & equivalent (17.41%) and readers/associate professors (16.16%) is relatively much high at universities teaching departments etc. The temporary teachers and visiting teachers constituted only 5.6% of total teacher's strengths.

**Table 1.17 Post-wise Number of Male & Female Teachers in Maharashtra**

Particulars	Gender	Professor & Equivalent	Reader & Associate Professor	Lecturer/ Assistant Professor	Demonstrator/ Tutor	Temporary Teacher etc	Visiting Teachers	Total
Number of Faculty	Male	9,752	12,731	63,627	2,169	4,465	1,721	94,465
	Female	3,846	6,213	44,010	3,990	5,010	1,405	64,474
	<b>Total</b>	<b>13,598</b>	<b>18,944</b>	<b>107,637</b>	<b>6,159</b>	<b>9,475</b>	<b>3,126</b>	<b>158,939</b>
% to Total	Male	10.32	13.48	67.36	2.30	4.73	1.82	100
	Female	5.97	9.64	68.26	6.19	7.77	2.18	100
	<b>Total</b>	<b>8.56</b>	<b>11.92</b>	<b>67.72</b>	<b>3.88</b>	<b>5.96</b>	<b>1.97</b>	<b>100</b>
<b>GDR</b>	-	2.54	2.05	1.45	0.54	0.89	1.22	1.47

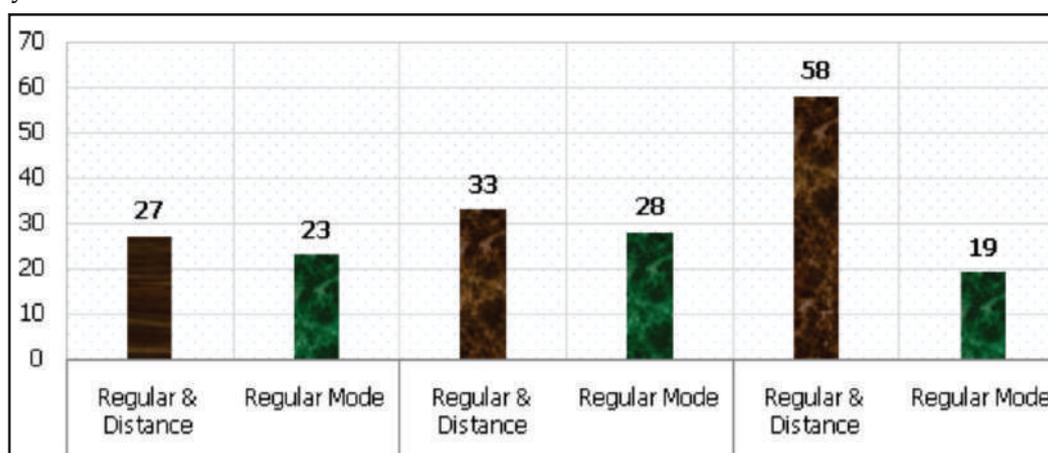
Source: AISHE, 2018-19

**Table 1.18 Post-wise Number of Teachers in Universities Teaching Departments and its Constituent Units / Off-campus Centres in Maharashtra**

Particulars	Gender	Professor & Equivalent	Reader & Associate Professor	Lecturer/ Assistant Professor	Demonstrator/ Tutor	Temporary Teacher etc.	Visiting Teachers	Total
Number of Faculty	Male	2,002	1,725	5,135	427	269	290	9,848
	Female	859	931	3,877	555	186	175	6,583
	<b>Total</b>	<b>2,861</b>	<b>2,656</b>	<b>9,012</b>	<b>982</b>	<b>455</b>	<b>465</b>	<b>16,431</b>
% to Total	Male	20.33	17.52	52.14	4.34	2.73	2.94	100
	Female	13.05	14.14	58.89	8.43	2.83	2.66	100
	<b>Total</b>	<b>17.41</b>	<b>16.16</b>	<b>54.85</b>	<b>5.98</b>	<b>2.77</b>	<b>2.83</b>	<b>100</b>
<b>GDR</b>	-	2.33	1.85	1.32	0.77	1.45	1.66	1.50

Source: AISHE, 2018-19

The pupil teacher ratio is higher for regular and distance mode in higher education as compared to regular mode (Fig. 1.8). The same is true for universities and colleges and also for university and its constituent units.

**Fig. 1.8: Pupil Teacher Ratio in Higher Education in Maharashtra, 2019**

Source: AISHE, 2018-19



Around 7842 research scholars from the State higher education institutions have published 10,926 papers in national & international journals during 2011 to 2016. Maharashtra shows relatively better performance in publications, citations and international collaborations (Fig. 1.9). The higher percentage point in citations indicate better quality of research publications from the State.

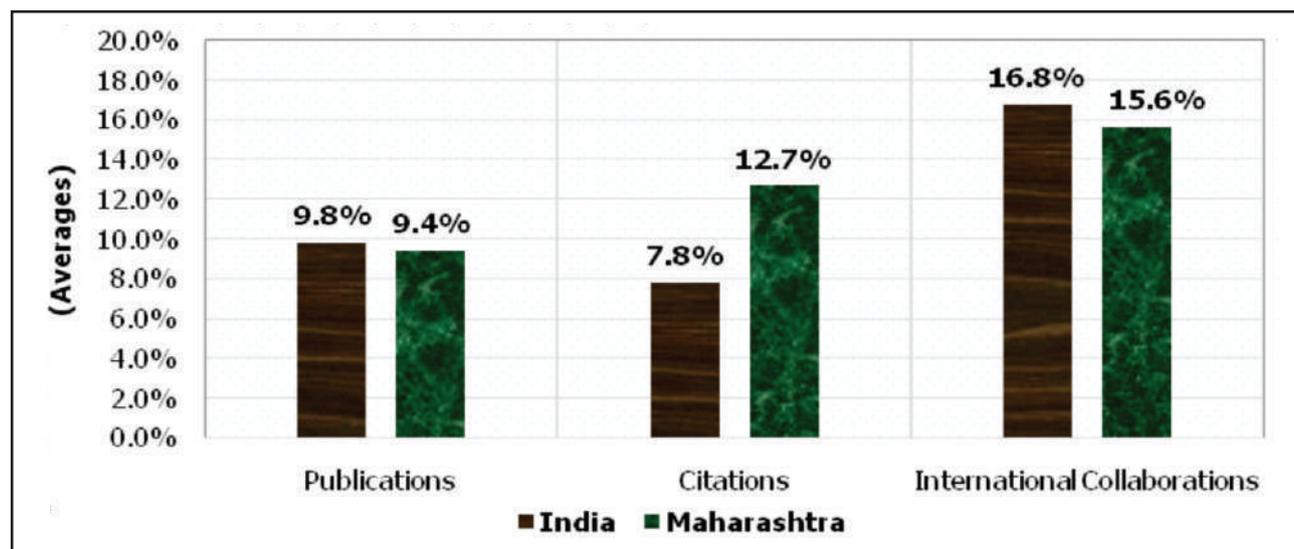


Fig. 1.9: Percentage of Publications, Citations and International Collaborations in Maharashtra and India

Source: [www.Scopus.com](http://www.Scopus.com).

## 1.6 Governance Structure of Higher Education

Directorate of Higher Education, Directorate of Technical Education, Directorate of Vocational Education, Directorate of Arts, and Directorate of Library are major pillars of governance of higher education in the State. The details of these are given below-

### Directorate of Higher Education

Directorate of Higher Education play a vital role in effective governance and implementation of various scheme of State and Central Government as well as updating and inducing educational innovation & executing various programmes at different levels. It adopts new technologies to explore and reach in remotest area to expand horizon of higher education

### MAHED

Maharashtra State Commission for Higher Education and Development (MAHED) is established as an independent body to formulate and implement long term policies for higher education in the State. Responsibilities of MAHED include guiding State Universities on curriculum reforms, improving academic standards, research, improvements in evaluation methods, leveraging use of ICT, nurturing national and international academic and research



networks, financial planning and management. It is a think-tank as well as nodal agency to prepare perspective plan of higher education in the State.

### **State Higher Education Council**

It is an apex advisory body constituted for policy, planning of higher education, assessment & quality assessment, providing timely advice to the state government for enhancing the quality and allocation of funds under Rashtriya Uchatar Shiksha Abhiyan.

### **Rajiv Gandhi Science & Technology Commission (RGSTC)**

The commission is established as an agent for change, development, and advancement through inputs of science and technology; to function as the prime mover for stimulating horizontal interaction between the universities, research and development institutions, industries and other institutions for developing and upgrading science and technology applications; to propagate applications through studies, an adaptation of technology, formulating projects, field demonstration, imparting necessary training, consultancy, and publications; to provide necessary seed capital and other inputs to the identified projects; to act as a facilitator or catalyst for transfer of technology from laboratories and other research efforts to applications on a larger scale; to catalyze the application of innovations in line departments of the Government: for example, in the education sector to create a knowledge-based society, improving health services etc., for sustained economic progress; and to create facilities in institutions for undertaking application-related research and development in areas or disciplines where such facilities are not available or are inadequate. The Commission also provides limited support to relevant basic research. However, the main role of the Commission is to promote application-oriented research and development work and thereafter its utilization on a wider scale.

## **1.7 Major Strengths and Key Challenges**

During the seven decades of Independence, higher education in India has expanded phenomenally. 'Access and equity' have been the major concerns and the State like Maharashtra has made a considerable progress in these areas. The coordination with NAAC, implementation of Common University Act and UGC guidelines for overall quality improvement have brought a significant change in the quality of higher education in Maharashtra. However, a lot more needs to be done. Quality, Teaching and Evaluation needs consistent attention and efforts, particularly in the areas of teaching that promotes experimental learning, self-reliance and commitment and evaluation that makes learning more enjoyable and sustainable. Some of the Strengths, Weaknesses, Opportunities and Threats have been delineated using SWOT analysis of higher education in Maharashtra. These have been represented in table 1.19.



Table 1.19 SWOT Analysis of Higher Education Institutions in Maharashtra

<b>Strengths</b>	<b>Weaknesses</b>
<ol style="list-style-type: none"> <li>1. Technological breakthroughs</li> <li>2. Quality culture through NAAC</li> <li>3. Quality research</li> <li>4. Equity &amp; Accessibility for all</li> <li>5. Imparting skill based and job-based learning.</li> <li>6. Large pool of Intellectual Capital</li> <li>7. Well established structure of State, Deemed Universities, and Private self-financed Universities and Autonomous colleges.</li> <li>8. Good strength of students in the Universities and Colleges</li> </ol>	<ol style="list-style-type: none"> <li>1. Very few colleges are autonomous.</li> <li>2. Affiliation of large number of colleges to Universities.</li> <li>3. Decision making in Universities is highly entralized.</li> <li>4. Non-involvement of student in decision making process</li> <li>5. No central recruitment board for the Academic staff in the Univ. &amp; Colleges.</li> <li>6. The major responsibility of delivery of higher education has been trusted on private managements with treasury of state.</li> <li>7. Large number of Litigations</li> </ol>
<b>Opportunities</b>	<b>Threats</b>
<ol style="list-style-type: none"> <li>1. Optimum utilization of available resources</li> <li>2. Monitoring the activities, functioning and achievements of the institution</li> <li>3. More mobility through CBCS system</li> <li>4. Increase in Industry- University network</li> <li>5. Integrated education to be developed with other sectors</li> <li>6. Emphasis on community based programmes and work on social issues</li> <li>7. Improving total examination system through reforms.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reorganizing goals according to present scenario</li> <li>2. Quality sustenance and enhancement in all avenues</li> <li>3. Development of trained and skilled human resources.</li> <li>4. High dropout rate</li> <li>5. Diversion of students from traditional courses to latest ones.</li> <li>6. Increasing employability</li> <li>7. Encouraging Entrepreneurship</li> </ol>

## 1.8 Policies and Key Initiatives

Directorate of Higher Education (DHE) has been playing a prime role in effective governance and implementation of various scheme of State and Central Government as well as updating and inducing educational innovation & executing various programmes at different levels. The State has emerged as an undisputed leader in higher education at the national level. The huge number of MoU's that the Maharashtra State Universities have with reputed educational Institutes in India and abroad, large number of Grants (Rs. 28.02 Cores) received for Minor Research Projects from UGC are remarkable in this context. All the eligible State Public Universities under DHE are assessed and accredited by NAAC with 9 out of 11 universities



securing 'A' grade. Out of the total 8569 higher educational institutes assessed and accredited by NAAC so far, more than one fifth i.e. nearly 1743 higher educational institutes are from Maharashtra state. Smooth functioning of the State universities and their reputation attracts students from all over India and from 102 foreign countries.

The ranking of higher education institutions at the national and global level is directly proportionate to the overall institutional quality and ability to excel. Quality is measurable and certain benchmarking can be done. Excellence in fact requires institutions to internalize the tendency to revise, reset and continue to pursue higher goals. This necessarily involves attempts to excel others as well as itself. The Maharashtra State Education Department (MSED) and the Directorate of Higher Education (DHE) in this regard have taken several steps in shaping the character of higher education institutions and to and promote institutional as well as individual excellence. These will make learning and teaching more fruitful and fulfilling, enjoyable and transformative.

The quality and excellence are focal points in mapping of higher education for the future generations. The road map towards these among others, includes principles like hands on learning, skill development, autonomy and freedom, quality research, dynamism in administration and relevance and innovativeness. Effective learning becomes visible through its transformative impact on the learner's personality as well as empowering the learner to transform his/her environment. This kind of learning needs to be fostered. MSED and the DHE, therefore with the help of universities and colleges, will have to promote environment in which the learners are freely engaged in experimentation and innovation, to solve their individual and societal problems. This will involve reforms and reconstruction at different levels.

MSED and DHE are also seen showing keen interest in addressing the problems of rural Maharashtra through various interventions in higher education, such as water, sanitation and hygiene, health and education, solar and wind energy to provide appropriate solutions to cater local needs. These initiatives can be undertaken through with the assistance and implementation of *Unnat Bharat Abhiyan* (UBA) to make transformational change in the Maharashtra's higher education with affordable technologies and implementation of *Swachh Bharat Abhiyan* to promote cleanliness and shape social behaviours.

Some of the initiatives taken to promote quality and excellence in higher education by MSED and DHE include -

***i. Maharashtra Public University Act, 2016:***

The act is introduced to mandate



- Student Centric Education
- Student participation in decision making
- Promoting holistic Development of Students
- Implementation of Student Welfare Schemes
- Equal opportunity to *Divyangjan* to access Quality Higher Education
- Choice Based Credit System
- Participation of experts from business and professional spheres
- Academic Calendar and examination Schedules
- Emphasis on skill development
- Promoting Entrepreneurship
- Promoting Autonomy
- Interdisciplinary and Multidisciplinary perspective
- MAHED (Maharashtra State Commission for Higher Education and Development)
- Improved procedure for granting permission to start new colleges
- permission to start new divisions on fast track basis
- Uniform statutes
- Modern Accounting Practice
- Academic and Administrative Audit

#### **ii. Fee Regulatory Act –**

The Fees and Admissions Regulatory Act was passed in 2015. Fee Regularity Authority was constituted with retired High Court Judge as chairman and with four other expert members. Through this -

- Fees are now approved much before college starts
- Transparent computerized method of Fees approval
- Physical inspection and strict scrutiny procedures to check mal practices
- Excess fees collection halted and penalized
- Defaulting colleges nabbed
- Colleges grievances are also properly addressed
- NRI Excess fees helped State Students by reduction in fees



### ***iii. Maharashtra Self-finance University Act –***

The act was passed in 2013, which allowed Private Universities to operate within the boundaries of the State as per the UGC regulations section 3.3. Maharashtra State through this act has taken efforts for the inclusion of private entities in the education sector. Currently, there are 11 State Private Universities running in the State and their stakeholders have invested in the state-wide curriculum and relevant courses keeping into the needs of market and the requirements of different regions of the State. Under the act, the State has now many skill universities and other educational institutions, which sets example of active promotion of private stakeholders in the upliftment of educational system.

### ***iv. Homi Bhabha and Hyderabad Sind Cluster Universities -***

To enhance the quality of higher education, the option of bringing 3-5 colleges together from different faculties and creation of cluster universities may provide effective use of human resource and other available infrastructure. Keeping this mandate, Department of Higher and Technical Education created Cluster University in Mumbai with the financial support from RUSA by bringing Institute of Science, Mumbai (as the lead college), Govt. B.Ed College, Mumbai, Sydenham College of Commerce and Economics, Mumbai, and Elphinston College, Mumbai and named as Dr. Homi Bhabha Cluster University, Mumbai. The University is up and functional. With the financial support from RUSA, Hyderabad (Sind) National Collegiate University was established on 30<sup>th</sup> October 2019, comprising of existing Hassaram Rijumal College of Commerce and Economics, Churchgate, Mumbai as a Lead College and Kishinchand Chellaram College, Churchgate, Mumbai and Bombay Teachers' Training College, Colaba, Mumbai as the constituent colleges.

### ***v. Globalization of Higher Education -***

Maharashtra has a significant network of State public universities and will increasingly face competition from private educational institutions within India as well as global institutions. The globalization of higher education pose a serious challenge to ensure public universities work closely with best global universities and learn from best practices, develop relationship and partnership in research to help faculties work with best brains globally in the given area of specialization and enhance joint publication and research outcome. Maharashtra in this regard has set up a Task Force involving senior representative of each State University and institutions under the State Higher and Technical Education Department to promote engagements at various levels including at Government to Government, Government to University and University to University and others. The major initiatives undertaken are as follows:



- 16 MoU's with other Governments and Universities at state level
- 20 Fully Funded Scholarships for Ph.D to UNSW Australia
- 18 Paid internships to France for 9 months
- Joint research with University of Portsmouth UK
- Technology Transfer
- More than 125 International Speakers in Universities under GIAN
- 125 MoU's of individual state universities with overseas universities
- Meritorious students get Scholarships to study in top ranking Universities globally to the tune of Rs. 20 crores annually and 30% awards to girl student

#### ***vi. Policy for Differently Abled Students -***

The policy was initiated by Govt. of Maharashtra to support differently abled students in Higher Education. A committee of experts was constituted to study and understand challenges faced by deferentially abled students. Some of the highlights of the policy are as follows:

- ❖ 20 minutes extra time in all examinations.
- ❖ 3% extra marks in one subject or combined of all subjects.
- ❖ Brail evaluation and question paper with large font size.
- ❖ Evaluation of the answers based on key points and not on length of the answer.
- ❖ Examination center would be nearby place of residence or at the college.

#### ***vii. Unnat Maharashtra Abhiyan***

The programme was initiated to address the problems of rural areas by involving Technical students under Unnat Maharashtra Abhiyan in the areas of water, wastewater, roads, health, hygiene and providing solutions.

#### ***viii. Skill Development and Startup Policy***

Maharashtra has been the hub of commercial, financial and industrial activities in India for decades and has been at the forefront of the academic growth. A large number of startups are centered around Mumbai and Pune adding to the academic activities of the state.

Skill development department has prepared a policy for startups in the state. The objective of the policy is to transform Maharashtra by cartelizing the growth of innovation – driven entrepreneurial ecosystem to achieve wholesome and inclusive socio-economic development. The policy aims to drive economic growth and job creation in coming years by



encouraging entrepreneurs to design novel solutions in the new age sectors such as Biotechnology, Artificial Intelligence, Internet of things, Clean Energy etc., as well as revamping traditional sectors. It is based on a holistic approach to promote and propagation of establishing a network of incubators, connecting relevant stake holders, simplifying the regulatory environment and making strategic investment to foster entrepreneurship across the state.

#### ***ix. Start-up Policy & Higher Education***

- Govt. of Maharashtra prepared a policy for start-up to transform Maharashtra by catalyzing the growth of innovation driven entrepreneurial eco system.
- Established Board of Innovation, Incubation and Entrepreneurship in Universities.
- Ideas-to – Enterprise (i2e) Start-up policy to create and facilitate Sectoral and Regional and entrepreneurial efforts.
- Ten state Universities have established Incubation Centers
- To attract angel and seed stage investment of Rs. 5000 Cr.
- To develop at least 15 tech incubators in collaboration with industry
- To facilitate incorporation of at least 10000 Start-ups
- To create 5 Lakhs direct and indirect employment

#### ***x. Initiatives taken for Autonomy Status***

- Government of Maharashtra implemented new regulation for Autonomous Colleges from 28<sup>th</sup> May 2018.
- Government of Maharashtra has given exemption in payment of affiliation/ recognition fee to Parent University every year.
- Onetime fee shall we paid at the time of conferment of Autonomous status or at the time of extension of Autonomous status.
- Number of Autonomous colleges increased from 47 to 83 in the last three years.
- Out of which 49 colleges are under Directorate of Higher Education and 34 are from Technical and others.



Table 1.20 Autonomous Colleges in Maharashtra as on 2019

Sl. No.	University	CPE 2015	CPE 2016	Autonomous College in Maharashtra as on 2019	Autonomous Colleges under DHE	CE 2015	UPE 2015	CPE 2016
1	BAMU, Aurangabad	5	5	2	1	0	0	1
2	GUG, Gadchiroli	0	1	0	0	0	0	0
3	MUM, Mumbai	4	8	32	23	3	1	0
4	NMU, Jalgaon	3	0	4	3	1	0	0
5	RTMNU, Nagpur	9	2	7	2	0	0	0
6	SGBAU, Amravati	3	1	3	2	0	0	0
7	SNDT, Mumbai	1	0	3	3	0	0	0
8	SPPU, Pune	6	4	17	7	1	1	0
9	SRTMUN, Nanded	0	1	2	1	0	0	0
10	SUK, Kolhapur	3	3	12	6	0	0	0
11	SUS, Solapur	1	3	1	1	0	0	0
<b>Total</b>		<b>35</b>	<b>28</b>	<b>83</b>	<b>49</b>	<b>5</b>	<b>2</b>	<b>1</b>

Abbreviations: 1. CPE – College with Potential for Excellence. 2. CE - College of Excellence. 3. UPE - Universities with Potential for Excellence.

#### *xi. Quality of Teachers*

- Maharashtra Government adopted UGC Regulations on minimum qualifications for appointment of teacher and other academic staff in universities and colleges and measures for the maintenance of standards in Higher Education
- Introduced Faculty Induction Programme
- Encouraging teaching faculty for FIP (Faculty Improvement Programme) i.e. for Higher Studies, Refresher, Orientation and Short-term courses
- Encouraging Faculty for continuing Research

#### *xii. Induction Programme for Students*

- During the transition from school to University
- To create essential mindset for Higher Education
- Helps both students and teachers for setting the pace of teaching learning experience
- UGC formulated Deeksharambh – a guide to student induction programme
- To develop a sense of belongingness



- To create awareness of their rights and responsibilities
- To acclimatizes with the institutes
- To know students and teachers each other

### *xiii. Induction Programme for Faculty*

- ❖ UGC started Training of Teachers (TOT)
- ❖ Govt. of India launched ARPIT (Annual Refresher Programme in Teaching)
- ❖ To improve the efficiency of academic and administrative process of institutions
- ❖ To familiarize the teachers with the Structure, Functioning, Rules, Regulation etc.
- ❖ To understand their rolls and responsibility
- ❖ To explore pedagogical process
- ❖ To recognize the importance of self-development
- ❖ To nurturing ethics and values in Higher Education

### *xiv. Choice Based System*

- Students have a choice of studying a mixed bag of subjects with a foundation or core courses from his academic discipline as well as courses from other disciplines. Re-designing of curriculum, into core component, elective component, and minor and soft skills component is possible. This is to enable students to choose subjects from several inter-disciplinary branches of knowledge and earn required credits in a degree programme at undergraduate and post graduate level. Students will also be able to move easily from one University to another. In all Universities Choice Based Credit System (CBCS) has been implemented to all P.G. programmes under the Academic Flexibility Program of the Universities. Open Electives courses for Post Graduated programmes are implemented.
- CBCS has been implemented for UG programmes in some Universities and in remaining Universities Preparation of UG programmes under CBCS is in process. The establishment of CBCS monitoring committee for continuous assessment for successfully implementation under Choice Based Credit System. The revised CBCS with NPTEL/SWAYAM courses has been implemented in Universities.

### *xv. Information and Communication Technology*

INN (Innovation Networking) was a unique and innovative experiment of TEQIP II (Technical Education Quality Improvement Programme) for a networking project of five institutes with ICT as the Team leader. The other institutes were VJTI-Mumbai, SPCE-





Mumbai, SGGSIET-Nanded, and BATU-Lonere. Institute of Chemical Technology (ICT) formed a virtual Innovation Networking (INN) of Institutes in the State of Maharashtra to participate in the Networking Projects with the above institutes to share existing infrastructure expertise to innovate for new products/ processes/systems.

This unique project generated immense interest among UG and PG students and faculty. Benefits of this great experiment were:

- o Involvement of UGs in the program-to train in necessary skills as per the projects.
- o Enthusiastic participation of team members.
- o Team spirit in progress of the project.
- o Direct application of engineering and scientific principles.
- o Learning by experience for all participants.
- o Understanding of all facets of project-design, materials, fabrication, finance, purchase, testing, inter-disciplinary input, accountability, deliverables.
- o Triggering interests among the students for doing something different.
- o Several offshoot projects from the partner institutes.
- o Interest generated in other institutes.
- o Possible Entrepreneurs from the participants.
- o Four Technology Licenses under INN

Digital classrooms are available in all State Public Universities and it is underway in most of the affiliated colleges. On Screen Marking System (OSM) in all examinations across all major Universities. HTE Sevaarth – an initiative for online payment salary payments to all teaching and non-teaching staff to Government and Public Institutions in the state.

#### ***xvi. Active Learning Methodologies***

- Project Based learning implemented in Technical Institutions in the state
- Flip Classrooms in select Public Universities and Colleges
- Virtual classrooms in Public Universities & LIVE Streaming facilities to affiliated colleges
- Setting up of E-CDLIC (E-content Development and Learning Innovation Centre) setup for innovation content development





### **xvii. Extension Programmes**

- Ek Bharat Shresth Bharat Abhiyan - Pairing of Universities; Appointment of Nodal Officer; Signing of MoU with the Universities of Odisha.
- Socio-cultural Mahotsav: Skill based competitions like street play, oratory, songs to promote socio-cultural practices of Maharashtra
- Adventure camp for students / Leadership camps
- Avhan: Disaster management training camp initiated by Chancellors office-1400 volunteers trained every year through NDRF (National Disaster Response Force). Further are attached to collector office disaster management cell.
- To organize 7 days camp in 3000 adopted villages towards cleanliness drive, water conservation, health checkup camp, cropping patterns of agriculture
- Kridamahotsav–Sports competition across state and get 5% government job reservation to winners
- Indradhanush – Inter-university cultural meet to develop artists, directors and film personalities
- Avishkar-Research Idea competition across the state to promote innovation and creativity

### **xviii. Training**

1. **Faculty Development Academy:** State has initiated setting up of Faculty Development Academy in Pune for training faculty members. Training to faculty is being made mandatory at various levels Govt. has issued a GR on 13<sup>th</sup> September 2019 for the establishment of Faculty Development Academy for developing a cadre of professionally trained teachers for Higher and Technical Education Department, Maharashtra.
2. **HRD Centres:** Five Human Resource Development Centres (HRDC) are conducting Refresher, Orientation and other Short-term Courses for teaching faculty at Mumbai, Pune, Aurangabad, Nagpur and Amravati Universities.
3. **Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMMNTT)** is sanctioned to conduct –
  - Centre of Excellence in Curriculum and Pedagogy (CECP) at SPPU, Pune, SUK, Kolhapur, VJTI, Mumbai.
  - Faculty Induction Programme (FIP) at MGAHV, Wardha



- Teacher Learning Centre (TLC) at SNTU, Mumbai
- Leadership for Academician Programme (LEAP) at IIT, Mumbai
- Faculty Development Centre (FDC) at Sydenham College of Commerce and Economics, Mumbai

### ***xix. Research***

Six hubs were set up in State Universities for commercialization or technology transfer to industry and incubate research projects that hold promise for scale-up, open to all undergraduate and post graduate students of Maharashtra under RUSA.

- **The Centre for Intelligent Systems** at the Savitribai Phule Pune University, Pune
- **The Centre for Advanced Sensors** at the Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
- **The Centre for Food Product Development** at the SNTU Women's University, Mumbai
- **The Centre for Bio-Actives and Natural Products** at the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
- **The Centre for Renewable Resources for Health Care** at the Swami Ramanand Teerth Marathwada University, Nanded
- **The Centre for Natural Products and Alternative Medicine**, Shivaji University, Kolhapur

### ***xx. Other Initiatives***

Given the strong aspiration amongst students to take up competitive exams and joining government, training is required for the students to help them to introduce the key areas of interests to the State and to address the fear of competitive examinations and lack of information. Due to these reasons aspirants from Maharashtra fall short and qualifying numbers are not always the best in civil service and subsequent examinations.

It is highly imperative that for exams like IAS, IFS, IPS and IRS etc., require high level of preparedness. Government has taken necessary efforts to provide Pre IAS training through various Institutes. Along with training, these aspirants are also provided scholarship. Taking the benefit of this many aspirants have availed this facility provided by Department of Higher and Technical Education Government of Maharashtra. This is an attempt to enhance the number of the aspirants to qualify in civil services examination from the state.



## 1.9 Objectives of the Report

Based on the information provided regarding the status of educational institutions of Maharashtra in general and the status of higher education institutions in particular, the State-Level Analysis of Accredited Higher Education Institutions of Maharashtra is prepared keeping the following objectives:

- To provide bird's eye view of NAAC accredited Higher education institutions of Maharashtra
- To briefly introduce NAAC system of quality assessment and process of accreditation including grading
- To provide both a quantitative and qualitative analysis of NAAC assessment reports of accredited institutes of Higher Education of Maharashtra
- To suggest a guide map for the Maharashtra Government's policy makers, administrative authority and institutes of Higher Education including all their stake holders
- To prepare a general SWOC (Strength, Weakness, Opportunity and Challenge) analysis report for Higher Education in Maharashtra
- Maharashtra is second largest state which is having highest number of accreditations of HEI's by NAAC next to Karnataka
- Maharashtra has been putting on great effort in the spread of Higher Education in pre-independent India
- Maharashtra has a tremendous scope for improvement of all quality parameters in Higher Education



## Chapter – 2

# Introduction to Quality Assurance, Assessment and Accreditation

### 2.1 Introduction

Education plays a crucial role in developing science and technology, leading to social and economic development. It provides knowledge, skills and competencies necessary for social and economic growth. The quality of higher education is responsible for developing human resources. There are many parameters that determine the quality of higher education in the country. The committees set up at the national level have given specific guidelines and recommendations for quality improvement in higher education. *The Standing Committee on Human Resource Development submitted its report on 'Issues and Challenges before Higher Educational Sector in India' (February 8, 2017) and gave the following Recommendations:*

**1. Resources:** A bulk of the enrolment in higher education is handled by State Universities and their affiliated colleges. Nearly 65% of the University Grants Commission (UGC) budget is utilized by Central Universities and their colleges while State Universities and their affiliated colleges use the remaining 35%. Hence, to make up for this, mobilization of funds in State Universities should be explored through other means such as endowments, contributions from industry, alumni and the like.

**2. Recruitment Process:** The large number of vacancies in the total number of sanctioned teaching posts indicates a need to restructure the recruitment process as a whole. Out of the total number of sanctioned teaching posts, 5,925 (35%) professor posts, 2,183 (46%) associate professor posts and 2,459 (26%) assistant professor posts are vacant. This could be due to two reasons – firstly due to the possibility that young students do not find the teaching profession attractive and secondly, it could be because the recruitment process is long and involves too many procedural formalities. Hence, the recruitment process should start well before a post is vacated. In addition, to make the profession of teaching more lucrative, faculty should be encouraged to undertake consultancy projects and be provided financial support for start-ups.

**3. Accountability and Performance of Teachers:** A system of performance audit of professors based on the feedback given by their students and colleagues should be set up. Other inputs



like research papers, publications by teachers should be added in the performance audit in due course of time.

**4. Enhancement of Employability Skills:** It has been observed that there is a lack of employable skills in students (especially from a technical background). Identification of skill gaps in different sectors and offering courses for enhancing employability in these areas has been recommended by the Committee. Some strategies in this regard include: (i) Industry Institute Student Training Support, (ii) Industrial Challenge Open Forum, (iii) Long Term Student Industry Placement Scheme, and (iv) Industrial Finishing Schools.

**5. Accreditation of Institutions:** The Committee notes that accreditation of higher educational institutions needs to be at the core of the regulatory arrangement in higher education. Further, quality assurance agencies should guarantee basic minimum standards of technical education to meet the industry demand for quality manpower.

**6. The National Board of Accreditation:** should act as a catalyst towards quality enhancement and quality assurance of higher technical education. Credit rating agencies, reputed industry associations, media houses and professional bodies should be encouraged to carry forward the process of rating of Indian universities and institutions. A robust rating system will give rise to healthy competition amongst universities and help improve their performance.

## 2.2 Globalization and its Challenges

In the context of globalization, there are many challenges to be addressed. India is the third largest higher education system in the world with around 993 universities, 39931 colleges and 10725 Standalone institutions imparting higher and technical education (AISHE, 2018-19). Among 993 universities, only 298 universities provide affiliation to 39931 colleges in India. The total enrolment in higher education is estimated to be 37.4 million, of which female constituted 48.6% of total share. Gross Enrollment Ratio (GER) in higher education institutions in India is steadily improving. GER was 26.3% in 2018-19 (AISHE, 2018-19), however, it is still well below the world average of 33%.

However, India's higher education system continues to be afflicted with the three problems- Access, Equity and Quality. Wide disparities exist in enrolment ratios among the States and between urban and rural areas. Disadvantaged sections of society and women have significantly lower enrolments than the national average.

The higher education sector is plagued by a shortage of well-trained faculty, poor infrastructure and outdated curricula. The use of technology remains limited. The quality of research and teaching at Indian universities are far below the international standards. Curricular reforms leading to regular revision and upgrading of curricula, introduction of





semester system, choice-based credit system, and examination reforms are yet to take place in higher educational institutions across the country.

With a few exceptions, a majority of our higher education institutions perform poorly in the area of quality on a relative global scale. Our system turns out nearly seven lakh science and engineering graduate every year. However, industry surveys show that only 46.21% of them are employable (India Skills Report, 2019-20), without additional training. The picture is quite dismal in other disciplines if a recent, non-official, employability report is to be believed.

In recent years, the massive expansion of enrolment in higher education in the country has resulted in unbearable burden being put on the physical and pedagogic infrastructure of colleges and universities. This is reflected in overcrowded classrooms, laboratory, library facilities and distortion in desirable student-teacher ratio, lowering the quality of teaching. All these issues require urgent corrective steps.

#### **Reforms needed in higher education sector:**

- Curricular and academic reforms are required to improve student choices, with a fine balance between the market oriented professional and the liberal higher education seeker.
- Higher education must be aligned to the needs of domestic as well as global market.
- Innovative and relevant curricula should be designed to serve different segments of the job market or provide avenues for self-employment.
- Emphasis must be given on the expansion of skill-based programmes in order to make our youth employable in the job market.
- Fact remains that today, around 66.4% of total enrolments in higher education are in private institutions (AISHE, 2018-19). Some of them excel in their chosen areas. There also exist legitimate concerns about many of these institutions being substandard, exploitative and suffering from the general shortcomings mentioned earlier. Governance reforms are required to enable these institutions to have their autonomy to develop distinctive strengths, while being held accountable for ensuring quality and fulfilling their responsibility to society.

### **2.3 Demographic Dividend and Education:**

India has a significant proportion of young population as compared to many advanced and developing countries. The youth population in age group 15-24 years is expected to increase from 23.3 crores in 2011 to 25.2 crores in 2021 (National Commission on Population, MoH&F, GoI 2019). In 2011, around 50% of our population was less than 24 years of age. Over the next





16 years, the proportion of the working population between age group 15-59 years, is expected to rise 60.7% (2011) to 65.1% (2036). This demographic structure presents us with an opportunity of a potential demographic dividend', which if tapped, could add to our growth potential, provided two conditions are fulfilled. Firstly, higher levels of health, education and skill development are to be achieved. Secondly, an environment fostering rapid economic growth and good quality employment/livelihood opportunities (to meet the needs and aspirations of the youth) is required.

It is thus evident that education is a vital ingredient for actualizing the 'demographic dividend' and for achieving higher, sustainable and more inclusive economic growth. India has the potential to capture a higher share of global knowledge-based work, for example by increasing its exports of knowledge-intensive goods and services. This is possible if there is an increased focus on higher education and its quality is globally benchmarked.

The Indian higher education system has also witnessed significant expansion in recent years, both in terms of the number of institutions as well as the student enrolment. This is also in response to growing and changing manpower requirements of today's knowledge intensive economy.

Although Higher Education has expanded significantly since independence, issues of access, equality, and quality still continue to be the areas of concern. At 26.3 %, India's Gross Enrolment Ratio (GER) is almost half of that of China, and lower than many developing countries. Inequity is also pervasive in the system, with the GERs of women and backward castes being much lower than the national average. Moreover, the higher educational institutions in India suffer from large quality variation in so much so that a NASSCOM-McKinsey Report-2005 has said that not more than 15% of graduates of general education and 25-30% of Technical Education are fit for employment.

Although there exists bodies for assessment and monitoring quality standards in the institutions of higher education, they suffer from many deficiencies. Many observers and policy makers have expressed their concerns. It follows that quality of higher education has a strong inter-relationship with physical and academic infrastructure. Thus, there is a need for major qualitative reforms in Indian higher education system in order to assure the high quality of colleges as well as of faculty.

## **2.4 Concept of Quality Assurance**

Quality assurance is a systematic process of determining whether a product or service meets specified requirements. It establishes and maintains certain standards for developing or manufacturing reliable products. A quality assurance system is meant to increase customer confidence and a company or institutional credibility. It helps in the direction of improving





work processes and efficiency in order to enable a company or institution to do better and compete with others. The National Assessment and Accreditation (NAAC) is an autonomous body to monitor Quality Assurance (QA) of the higher educational institutions. ISO (International Organization for Standardization) is a driving force behind QA practices and mapping the processes used to implement it. QA is often paired with the ISO 9000 international standard. Many companies use ISO 9000 to ensure that their quality assurance system is in place and effective. The concept of QA as a formalized practice started in the manufacturing industry, and it has since spread to most industries, including software development. Quality assurance is a way of preventing mistakes and defects in manufactured products and avoiding problems when delivering solutions or services to customers; which ISO 9000 defines as "part of quality management focused on providing confidence that quality requirements will be fulfilled

Globally, 'Quality Assurance' in higher education is defined as a process by which an institution is evaluated, at least in part, by an external body in its educational offering. Assessment and Accreditation is broadly used for understanding the "Quality Status" of an institution. In the context of higher education, the accreditation status indicates that the particular Higher Educational Institutions (HEI) – a College, a University, or any other recognized Unit therein, meets the standards of quality as set by the Accreditation Agency, in terms of its performance, related to the educational processes and outcomes, covering the curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organization, governance, financial well-being and student services.

'Academic Quality' means the quality of teaching, learning and research and consequently their contribution to enhancement of knowledge and includes physical infrastructure, human resources (including faculty), administration, course curricula, admission and assessment procedures, governance structures, of the higher educational institution (The NAAHEI Bill, 2010).

'Accreditation' means the process of quality control in higher education, whereby, as a result of evaluation or assessment or by any other scientific method followed by accreditation agencies, a higher educational institution or any programme conducted therein is recognized by it as conforming to parameters of academic quality and benchmarking of such academic quality determined by the appropriate statutory regulatory authority. 'Assessment' means the process involved in ascertaining or verifying the capabilities of a Higher Educational Institutions in terms of its physical infrastructure and human resources prior to the commencement of its academic programmes.

'Assessment and Accreditation Agency' means an agency such as National Assessment and Accreditation Council already recognized by University Grants Commission, an Agency





established by an Act of parliament to carry out accreditation [The UGC (Mandatory Assessment and Accreditation of Higher Educational Institutions, Regulations, 2012)].

Assessment and accreditation in the higher education, through transparent and informed external review process, are the effective means of quality assurance in higher education to provide a common frame of references for students and others to obtain credible information on academic quality across institutions thereby assisting student mobility across institutions, domestic as well as international.

## 2.5 The Accreditation Process

It is a process in which, an agency or its designated representatives evaluates the quality of higher education institution as a whole or a specific educational programme, in order to formally recognize it as having met certain predetermined minimal criteria or standards. The result of this process is usually the awarding of a status of recognition and sometimes of a license to conduct educational programs within a time-limited validity.

The process can imply initial as well as periodic self-study and evaluation by external peers. The accreditation process generally involves three steps with specific 'activities':

- (i) A self- evaluation process conducted by the faculty, the administrators and the staff of the institution or academic programme, resulting in a report that takes as its references set of standard and criteria of the accrediting body.
- (ii) A site visit, conducted by a team of peers, selected by the accrediting organization, which reviews the evidence, visits the premises and interviews the academic and administrative staff resulting in an assessment report, including a recommendation to the accrediting body; and
- (iii) Examination of the evidence and recommendation on the basis of the given set of criteria concerning the quality and resulting in a final judgment and the communication of the formal decision to the institution and other constituencies, if appropriate.

## 2.6 Types of Accreditation

There are two types of accreditations:

- A) Institutional Accreditation:** Evaluation of the quality of institutions with reference to its competency to provide quality. In India, National Assessment and Accreditation Council, under the aegis of the University Grants Commission, undertakes this kind of quality assurance.



**B) Programme Accreditation:** This is assured on the basis of the outcome programmes. In technical education, the quality as well as the relevance of the programme is specially assessed and evaluated during the process of accreditation. This is to ensure the employability by the profession. In India, National Board of Accreditation, under the aegis of All India Council for Technical Education, undertakes this kind of quality assurance.

## 2.7 Accreditation Practices

There are recognized (Government authorities in their respective countries) as well as unrecognized higher education accreditation organizations (identified by the organizations themselves, or other independent authorities, that lack appropriate recognition or authorization).

### 2.7.1 International Practices

Over 150 countries have some kind of accreditation mechanism to ensure quality in higher education. Most of Quality Assurance (QA) bodies are supported directly or indirectly by the respective governments. The International Network for Quality Assurance Agencies in Higher Education (INQAAHE) is a world-wide association of over 200 organizations active in the theory and practice of quality assurance in higher education. INQAAHE has provided Guidelines for Good Practices (GGP) to be followed by the QA bodies. While organization like, Asia Pacific Quality network (APQN) caters to enhancing the quality of higher education in Asia and the Pacific region through strengthening the work of quality assurance agencies and extending the co-operation between them. APQN has provided over 120 member institutions, including NAAC, having interest in quality assurance. A good number of countries have multiple QA bodies.

### USA

Even though the rules of accreditation differ greatly from country to county, quality assurance is largely done by a government body, usually the Ministry of Education. However, there are exceptions, such as United States of America (USA), where this process is taken care by private organisations and the legitimacy is validated through recognition by the United States Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA). Both these institutions have different purposes. While institutions approach the USDE to be eligible for federal aid funds, the CHEA is approached for a valid academic legitimacy, often to solidify their status as a high-ranking institution.

If the accrediting organisation is not legitimate, their accreditation will not be considered as valid. Similarly, students who attend such institutions will have a lot of difficulties to face



with respect to their degree. In order to assist students and organisations, several bodies (national as well as international) accurate and publish lists of accredited institutions (educational and otherwise). Along with this, they also publish a list of other accreditors that do not possess legal stature, along with a list of unaccredited higher education institutions. The United States organization CHEA maintains an international directory of education ministries and other recognized higher education quality assurance bodies worldwide. The 2007 version of that directory lists 467 recognized bodies in 175 countries. This list also contains exhaustive details of fraudulent accreditation mills (which have no legal or academic value) and religious accreditation bodies (whose accreditation may have doctrinal significance but lacks recognized academic value). Also included are some organizations that do not offer educational accreditation but have been falsely identified as accrediting bodies by organizations that claim to have been accredited by them. A notable example of this last type is UNESCO, which does not have authority to recognize or accredit higher education institutions or agencies.

**1. International Accreditation Forum (IAF)** seeks to develop a standard program of conformity assessment which reduces risk for enterprises by assuring them of the reliability of accredited certificates. This accreditation is proof that the accredited body is competent and impartial.

**2. Accrediting Commission International or ACI** (also known as **Accrediting Commission International for Schools, Colleges, and Theological Seminaries**) is an unrecognised accrediting body primarily responsible for accrediting religious schools and colleges, including seminaries and Bible colleges. It is also responsible for accrediting non-USA schools that offer business education programs.

**3. Council for Higher Education Accreditation (CHEA)** is an organisation responsible for promoting national advocacy for accredited institutions. CHEA carries out periodic review (“recognition”) of institutional and programmatic accrediting organizations (CHEA, 2020).

**4. Distance Education Accrediting Commission (DEAC)** is a non-profit national educational accreditation agency specializing in the accreditation of distance education programs. It was established in 1926 as the National Home Study Council (NHSC) and its formation was in response to a Carnegie Corporation study that found a lack of standards to ensure quality in correspondence schools. In 1959, the organization was formally recognized as an accredited of higher education institutions. The organization comprises of over 100 distance education institutions and these include trade associations, for-profit companies, colleges, universities and military organizations. The DEAC follows a strict criterion for approving schools for accreditation, and the process includes examining the schools' educational, ethical, and





business practices (Source: <https://www.deac.org/Discover-DEAC/DEAC-History.aspx>).

**5. Quality Assurance Agency for Higher Education (QAA)** is an independent body that checks on standards and quality in UK higher education. It conducts quality assessment reviews, develops reference points and guidance for providers, and conducts or commissions research on relevant issues. (Source: <https://www.qaa.ac.uk/reviewing-higher-education/types-of-review/higher-education-review>)

**6. National Committee for Quality Assurance (NCQA)** is independent 501© (3) nonprofit organization in the United States that works to improve healthcare quality through the administration of evidence-based standards, measures, programs, and accreditation. It operates on a formula of measure, analyze, and improve and it aims to build consensus across the industry by working with policymakers, employers, doctors, and patients, as well as health plans. (Source: <https://www.ncqa.org/about-ncqa/>)

#### **7. Commission on Institutions of Higher Education (NEASC-CIHE)**

- a. The New England Association of Schools and Colleges (NEASC) accredits educational institutions within the New England region of the United States and it is one of six regional accrediting agencies which are recognized by the US Department of Education (DOE) and Council for Higher Education Accreditation (CHEA). The NEASC investigates the integrity of the institution's public claims (advertisements, promotions, etc.) regarding the programs available, and ensures that the school is committed to improving continually.
- b. The Commission on Institutions of Higher Education (CIHE) is the division within the New England Association of Schools and Colleges that is directly responsible for the accreditation of higher education institutions.

(Source: <https://www.neche.org/about-neche/the-commission/>)

#### **8. Northwest Commission on Colleges and Universities (NWCCU)**

The Northwest Commission on Colleges and Universities is one of seven regional organizations recognized by the U.S. Department of Education to accredit post secondary institutions within the United States. It is incorporated as a legally established, private 501(C) (3) non-profit corporation for the expressed purpose of accrediting higher education institutions in the seven-state Northwest region which includes Alaska, Idaho, Montana, Nevada, Oregon, Utah, and Washington. Membership and organization of the Northwest Commission on Colleges and Universities is set forth in its Bylaws. NWCCU is recognized by the U.S. Department of Education as the authority on the educational quality and institutional effectiveness of higher education institutions in the seven-state Northwest





region of Alaska, Idaho, Montana, Nevada, Oregon, Utah, and Washington. The Commission also recognizes higher education institutions internationally, including Canada. NWCCU is also recognized by the Council on Higher Education Accreditation (CHEA). The Commission oversees regional accreditation for 162 institutions. Its decision-making body consists of up to twenty-six Commissioners who represent the public and the diversity of higher education institutions within the Northwest region.

### **Mission**

The Northwest Commission on Colleges and Universities accredits institutions of higher education by applying evidence-informed standards and processes to support continuous improvements and promote student achievement and success.

### **History**

NWCCU is a voluntary, non-governmental organization for the improvement of educational institutions founded in 1917. Originally known as the Northwest Association of Schools and Colleges Commission on Colleges and Universities, the connection between the association of secondary schools and the Commission on Colleges and Universities was severed in 2002, and the Commission was renamed the Northwest Commission on Colleges and Universities.

The Northwest Commission on Colleges and Universities and its predecessors have been listed since 1952 by the U.S. Department of Education as a nationally recognized accrediting agency for institutions offering programs of at least one academic year in length at the post-secondary level. The Commission's recognition was most recently reaffirmed by the Department in 2018.

(Source: <http://www.nwccu.org/about-nwccu/>)

## **9. Higher Learning Commission**

The Higher Learning Commission, also known as the HLC, is an organization responsible for accrediting colleges in the United States. As a regional accreditation organization, it has separate divisions that offer accreditation for colleges in the Midwest and other regions of the United States. Regional accreditation is important for any student who needs financial aid for college and plans on applying for assistance from the federal government.

### **Accreditation Process**

The main responsibility of Higher Learning Commission (HLC) is to ensure all colleges meet the mandatory requirements for accreditation. Unless a college or university prove upfront that it meets those requirements, the process does not continue. The HLC, then provide institutions with a list of its policies to follow and send a committee to meet with representatives from the institutions. This committee generally seek information on number





of students completed their studies each year, the number of students found employment in their fields and the experience and backgrounds of campus professors.

### **HLC Policies**

The HLC has a number of policies in place that all colleges must follow after receiving accreditation. Some of these policies relate to the way that current students, alumni and others can file complaints against a college. If a college receives a complaint, the HLC send investigators to the college to meet with the dean and other professionals. Based on the results of that investigation, the HLC put the college on probation or revoke its accreditation. Colleges that lose accreditation, however, is allowed to apply again, and those placed on probation have several years to meet the minimum requirements for accreditation.

(Source: <https://www.hlcommission.org/>)

### **Germany**

In Germany, the Federal States (Lander) are responsible for the shape and development of higher education and research. The responsibility for the contents and organizations of studies and examinations as well as for the quality of higher education is in principle with the Lander. It has been until recently finally implemented by the licensing of programmes and definition of the requirements of the exams. According to the Higher Education Framework Act, proposals for standards of study courses and degrees as well as for their mutual recognition have been for a long time made by framework regulations for studies and examinations, which had to be jointly adopted by the Lander and the Hochschul rektoren konferenz (HRK). Based on recommendations of HRK and Wissenschaftsrat, since the mid-1990s evaluation procedures for teaching have been introduced with the goal to increase transparency, strengthen institutional responsibility, support higher education institutions in the introduction of systematic quality-promoting measures as well as advancing the profile, image and competitive of German HEIs. Since the beginning 1998, the HRK runs a three-year national programme to enhance the exchange of information and experience in the field of quality improvement measures in German HEIs – the Quality Assurance Project. Moreover, in recent years evaluation agencies have been established on regional level either by the federal states or by association of universities.

(Source: ENQA workshop 3)

### **United Kingdom**

In the UK, it is illegal to offer a qualification that is or might seem to be UK degree unless the awarding body is recognized by the Secretary of State, a Royal charter or Act of Parliament to grant degrees. Private Higher Education (HE) and Further Education (FE) institutions are





unregulated, but may choose to become accredited by various non-regulatory bodies such as the British Accreditation Council or the British and Accreditation Service for International Colleges in order to demonstrate third-party assessment of the quality of education they offer. The Universities Funding Council and Polytechnics and Colleges Funding Councils established in the UK under the Education Reform Act 1988, have responsibility for the public funding of the FE and HE sector.

Quality Assurance Agency (QAA) checks how universities, colleges and alternative providers of UK higher education maintain their academic standards and quality. It does this through external peer review. Reviewers check that the 19 expectations of the Quality Code, agreed and recognised by the UK higher education sector, are met. It also provides advice to the Privy Council of the United Kingdom, on institutions' requests for degree awarding powers and the right to be called a university.

In addition to its role in sustaining the reputation of UK higher education, QAA also regulates the Access to Higher Education Diploma, a qualification that enables individuals without 'A' Levels or the usual equivalent to enter higher education.

QAA works closely with other organizations that have an interest in the reputation of UK higher education, including the Higher Education Academy, Universities of UK and Guild Higher Education.

(Source: <http://www.qaa.ac.uk>)

## Philippines

Voluntary accreditation of all higher education institutions is subject to the policies of the Commission on Higher Education. Voluntary accrediting agencies in the private sector are the Philippines Accrediting Association of Schools, Colleges and Universities' Commission on Accreditation (PACUCOA), and the Association of Christian Schools, Colleges and Universities Accrediting Association Inc. (ACSCU-AAI) which all operate under the umbrella of the Federation of Accrediting Agencies of the Philippines (FAAP), which itself is the certifying agency authorized by CHED. Accreditation can be either of programs or of institutions. Accrediting agencies for government-supported institutions are the Accrediting Association of Chartered Colleges and Universities Commission on Accreditation (ALCUCOA). Together they formed the National Network of Quality Assurance Agencies (NNQAA) as the certifying agency of government-sponsored institutions. However, NNQAA does not certify all government-sponsored institutions. The Technical Vocational Education Accrediting Agency of the Philippines (TVEAPP) was established and registered with the Securities Exchange Commission on 27<sup>th</sup> October 1987. On 28<sup>th</sup> July 2003, the FAAP board accepted the application of TVEAPP to affiliate with FAAP. (Source: [www.inqahe.org](http://www.inqahe.org))





## Russia

In Russia, accreditation/national recognition is directly overseen by the Ministry of Education and Science of Russian Federation. Since 1981, Russia has followed the UNESCO international regulations to ensure Russian institutions and international institutions meet higher quality standard. It is illegal for a school to operate without government approval. The Russian Federation has a three-step recognition system: License, accreditation and Attestation. Additional agencies, including the National Accreditation Agency (NAA) of the Russian Federation, under Ministry of Education and Science of Russian Federation, operate under the authority of the Federal service of Supervision in Education and Science. NAA is recognised as the organization in Russia responsible for dissemination of knowledge and information on procedures of the state accreditation of HEIs. It develops materials and methodological recommendations for conducting self-evaluations and external reviews, trains experts, conducts research into the development of QA of higher education in Russia, and prepares the final reports on the quality of the HEIs.

(Source: <http://www.akkork.ru/e/about/> and <http://www.russianenic.ru/english/index.html>)

### 2.7.2 Accreditation in India

As on 31.03.2019, there are 911 Universities listed by the UGC under Section 2(f) of UGC Act 1956 (Annual Report 2018-19, UGC, 2019). It includes 51 Central Universities, 397 State Public Universities, 334 State Private Universities, 126 Deemed to be Universities, and 3 Institutions established under State Legislation. UGC has also 12070 Colleges listed under Section 2(f) and out of these colleges 9755 colleges are under Section 12B in the Higher Education sector. So far, as the number of universities in states is concerned, Rajasthan tops with 83 universities, followed by Uttar Pradesh (75) and Gujarat (67). This pool of HEIs is serviced for accreditation purposes by either:

1. National Assessment and Accreditation Council (NAAC) for a score and grade based institutional assessment and accreditation.
2. National Board of Accreditation for programmes accreditation in technical Institutions (the term “Technical Institution” as defined under AICTEE Act.).
3. Accreditation Committee of Bar council of India.
4. National Accreditation board of Medical Council of India.
5. Accreditation Board (AB)– set up by ICAR in 1996 with a mandate to accredit agriculture institutions.

(Source: <http://www.naac.gov.in/>)





### 2.7.3 Mandatory Accreditation

Accreditation earlier was voluntary in India as a result of which less than one-fifth of the colleges and less than one third of all universities have obtained accreditation.

The department of Higher Education, Government of India has taken the following measures for the mandatory assessment of higher educational institutions:

1. National Accreditation Regulatory for Higher Educational institutions Bill, 2010 (NARAHE Bill) in Lok Sabha.
2. The UGC (Mandatory Assessment and Accreditation of higher Educational Institutions), Regulations, 2012.

Mandatory accreditation in the higher education is aimed to enable the higher education system in the country to become a part of the global quality assurance system.

(Source: the NARAHEI Bill, 2010).



## Chapter – 3

### NAAC's Assessment & Accreditation Process and Higher Education Institutions in Maharashtra – An Overview

#### 3.1 NAAC's Process of Assessment and Accreditation

Since its beginning in 1995 (when the grading was limited to Accredited and Not Accredited system), NAAC's process of assessment and accreditation has undergone changes at least twice before the current 4 point grading system as presented in tables 3.1 (a), 3.1 (b) and 3.1(c). While the overall weightages in the new methodology and grading system remain the same, inclusion of micro aspects and assigning weightage to these aspects has been the new introduction. The assessment based on above aspects is expected to reduce subjectivity in the process of Assessment and Accreditation. The different grading systems followed by NAAC over the years are given below:

**Table 3.1 (a) Grading According to the Star System**

Grades	Weighted Scores in % (upper limit exclusive)
A*****	≤75
A****	70 - 75
A***	65 - 70
A**	60 - 65
A*	55 - 60

**Table 3.1(b) Grading According to Nine – Points Scale**

Grades	Weighted Scores in % (upper limit exclusive)
A++	95 - 100
A+	90 - 95
A	85 - 90
B++	80 - 85
B+	75 - 80
B	70 - 75
C++	65 - 70
C+	60 - 65
C	55 - 60



**Table 3.1 (c) Grading According to the Cumulative Grade Point Average (CGPA) Grading System**

Grades	Range of CGPs	Performance Indicators
A	3.01 - 4.00	Very Good (Accredited)
B	2.01 - 3.00	Good (Accredited)
C	1.51 - 2.00	Satisfactory (Accredited)
D	<1.50	Unsatisfactory (Not Accredited)

In the initial stage, there were 4 universities and 9 colleges graded according to Star Grading System. The number of institutions graded under Nine Points Grading System went up to 6 universities and 485 colleges. The list of institutions further expanded to 16 universities and 551 colleges in India under the Four Point Cumulative Grade Point Average (CGPA) Grading System.

After several rounds of discussion with experts and stakeholders, NAAC has arrived at an evaluation framework consisting of seven criteria for the 'Assessment and Accreditation Process' (A&A). They are the following:

1. Curricular Aspects
2. Teaching -Learning and Evaluation
3. Research Consultancy and Extension
4. Infrastructure and Learning Resources
5. Student Support and Progression
6. Organization and Management
7. Healthy Practices

From 1<sup>st</sup> April 2007, there have been some modifications in the aforementioned seven criteria and the grading pattern. From 1<sup>st</sup> April 2012, changes were also made with respect to the content (Key Aspects) and in the weightages given to each criterion. The details of the modified seven criteria and their weightages are available on NAAC website ([www.naac.gov.in](http://www.naac.gov.in)).

The outcome of the A&A process includes both qualitative and quantitative reports. The confidential score sheets form the quantitative reports and the Peer Team Reports (PTR) form the qualitative reports. The PTRs usually consist of three sections; (i) Introduction, giving the scope of work, brief history and profile of the institution, (ii) Criteria-Wise Analysis, detailing the criterion specific achievements and strengths & weakness in the institution under assessment; and (iii) Overall Analysis, as the concluding section with the recommendations of the Peer Team.



The PTR attempts to illustrate an institution - its strengths, weakness and suggestions or directions for improvement and to move ahead in its quest for quality. It seeks to map the Institution's short term as well as long term goals. Further, it shows the broad national and global arena in which it has to compete (with others) in its pursuit of excellence. Though the new reporting format comprises of the same major headings of the previous format, it is more specific and stresses on reporting all the attributes of the institutions (the strengths and the weaknesses). NAAC is also working actively towards formulating a corpus of best practices that are being evolved nationally in the working of many institutions, and a target framework of these, will be immensely useful to individual institutions and higher education management as a whole.

### 3.2 Revised Criteria and Evaluation Matrix

The details of the various criteria and the differential weightage allocated to these criteria for various categories of institutions are summarized in tables 3.2 (a), 3.2 (b), and 3.2 (c).

**Table 3.2 (a) The Seven-criteria Evaluation Matrix adopted up to March 2007**

	Criteria	University	Autonomous College	Affiliated College
C-1	Curricular Aspects	15	15	10
C-2	Teaching-Learning and Evaluation	25	30	40
C-3	Research, Consultancy and Extension	15	10	05
C-4	Infrastructure and Learning Resources	15	15	15
C-5	Student Support and Progression	10	10	10
C-6	Organization and Management	10	10	10
C-7	Healthy Practices	10	10	10
<b>Total</b>		<b>100</b>	<b>100</b>	<b>100</b>

**Table 3.2 (b) The Seven-criteria Evaluation Matrixes adopted from April 2007 to March 2012**

	Criteria	University	Autonomous College	Affiliated College
C-1	Curricular Aspects	150	100	50
C-2	Teaching-Learning and Evaluation	250	350	450
C-3	Research, Consultancy and Extension	200	150	100
C-4	Infrastructure and Learning Resources	100	100	100
C-5	Student Support and Progression	100	100	100
C-6	Governance and Leadership	150	150	150
C-7	Innovative Practices	50	50	50



The colleges in the affiliating system have little freedom to make or effect changes in the curriculum. Therefore, the universities get a greater weightage (150) in Curricular Aspects. Here, teaching-learning is backed by Research, Consultancy and Extension while in colleges there is not much scope for these activities. Therefore, colleges have a larger score for 'Teaching-Learning and Evaluation', while having a lesser score for 'Research, Consultancy and Extension'. The universities have greater weightage in that area. The weightage in the rest of the criteria are the same for both. The second and third criteria are the most important ones for colleges, and these are the areas where they need to focus in maximum. 'Student support and progression' reflect the success of both academic and administrative support services extended by the institution to ensure wholesale campus life for student community. 'Infrastructure and learning resources' need long term planning and organization. Colleges seldom show interest in such investment, improvisation and innovation. However, there is still some scope where they can add, invent, innovate and enrich and these are appropriately considered while deciding the weightages and also under criteria Innovative Practices.

**Table 3.2 (c) The Seven-criteria Evaluation Matrix adopted from April 2012 to 2017**

	Criteria	University	Autonomous College	Affiliated College
C-1	Curricular Aspects	150	150	100
C-2	Teaching-Learning and Evaluation	200	300	350
C-3	Research, Consultancy and Extension	250	150	150
C-4	Infrastructure and Learning Resources	100	100	100
C-5	Student Support and Progression	100	100	100
C-6	Governance, Leadership and Management	100	100	100
C-7	Innovative and Best Practices	100	100	100
<b>Total</b>		<b>1000</b>	<b>1000</b>	<b>1000</b>

### 3.3 Revised Accreditation Format (RAF-July 2017)

#### 3.3.1 Units of Assessment

NAAC's instrument is developed to assess and grade institutions of higher education through a three-step-process and make the outcome as objective as possible. Though the methodology and the broad framework of the instrument is similar, there is a slight difference in the focus of the instrument depending on the unit of Accreditation, i.e., Affiliated / Constituent colleges / Autonomous colleges / Universities / Health Science / Teacher / Physical Education.





### A) Institutional Accreditation

- University: University Central Governance Structure along with all the Undergraduate and Postgraduate Departments.
- College: Any College (Affiliated, Constituent or Autonomous) with all its departments of studies.

### B) Department Accreditation

- Any Department/school/centre of the University.
- Presently, NAAC is undertaking only institutional accreditation. Experts groups have been constituted to work on Program Accreditation.

### 3.3.2 Criteria & Weightages

NAAC has identified a set of seven criteria to serve as the basis of its assessment procedures (Table 3.3). NAAC has categorized Higher Educational Institutions into three major types (University, Autonomous College, and Affiliated/Constituent College) and have assigned different weightages to these criteria under different key aspects based on the functioning and organizational focus of the three types of HEIs.

**Table 3.3 The Seven-criteria Evaluation Matrix adopted from July 2017 to December 2019**

	Criteria	University	Autonomous College	Affiliated College
C-1	Curricular Aspects	150	150	100
C-2	Teaching-Learning and Evaluation	200	300	350
C-3	Research, Consultancy and Extension	250	150	120
C-4	Infrastructure and Learning Resources	100	100	100
C-5	Student Support and Progression	100	100	130
C-6	Governance, Leadership and Management	100	100	100
C-7	Innovative and Best Practices	100	100	100
<b>Total</b>		<b>1000</b>	<b>1000</b>	<b>1000</b>

### 3.4 The Assessment Process adopted since January 2020

Taking cognizance of the diversity in the kinds of institutions HEIs have been grouped under three categories namely, Universities, Autonomous Colleges and Affiliated/Constituent Colleges. The assessment process will be carried out in three stages. As stated earlier, it will comprise three main components, viz., Self-study Report (SSR), Student Satisfaction Survey





and the Peer Team Report. The SSR has a total of 115 Metrics for Universities, 107 Metrics for Autonomous, 93 & 96 Metrics for UG & PG Affiliated/Constituent Colleges respectively, covering the Seven Criteria described earlier. The SSR has two kinds of Metrics: one, those requiring quantifiable facts and figures as data which have been indicated as 'quantitative metrics' (QnM); and two, those metrics requiring descriptive responses and are accordingly named 'qualitative metrics' (QIM). Table 3.4 (a) depicts the distribution of Key Indicators (KIs) and Metrics across them.

**Table 3.4 (a) Distribution of Metrics and KIs across Criteria**

Type of HEIs	Universities	Autonomous Colleges	Affiliated/Constituent Colleges	
			UG	PG
Criteria	7	7	7	7
Key Indicators (KIs)	34	34	31	32
Qualitative Metrics (QIM)	36	35	35	36
Quantitative Metrics (QnM)	79	72	58	60
Total Metrics (QIM +QnM)	115	107	93	96

Table 3.4 (b) gives the details of weightage given to the various Key Indicators and Criteria. In view of the variations in the institutional emphasis on the KIs among the three categories of HEIs, weightages have been appropriately demarcated. Each metric is designated a weightage which is indicated elsewhere in this Manual.

**Table 3.4 (b) Distribution of Weightages across Key Indicators (KIs)**

Criteria	Key Indicators (KIs)	Universities	Auto-nomous Colleges	Affiliated/Constituent Colleges	
				UG	PG
1. Curricular Aspects	1.1 *(U) Curriculum Design and Development	50	50	NA	NA
	1.1. *(A) Curricular Planning and Implementation	NA	NA	20	20
	1.2 Academic Flexibility	50	40	30	30
	1.3 Curriculum Enrichment	30	40	30	30
	1.4 Feedback System	20	20	20	20
	<b>Total</b>	<b>150</b>	<b>150</b>	<b>100</b>	<b>100</b>
2. Teaching-Learning and Evaluation	2.1 Student Enrolment and Profile	10	20	40	40
	2.2 Catering to Student Diversity	20	30	50	50
	2.3 Teaching-Learning Process	20	50	50	50



	2.4 Teacher Profile and Quality	50	50	60	60
	2.5 Evaluation Process and Reforms	40	50	30	30
	2.6 Student Performance and Learning Outcomes	30	50	60	60
	2.7 Student satisfaction Survey	30	50	60	60
	<b>Total</b>	<b>200</b>	<b>300</b>	<b>350</b>	<b>350</b>
3. Research, Innovations and Extension	3.1 Promotion of Research and Facilities	20	20	NA	NA
	3.2 Resource Mobilization for Research	20	10	15	15
	3.3 Innovation Ecosystem	30	10	NA	10
	3.4 Research Publications and Awards	100	30	15	25
	3.5 Consultancy	20	10	NA	NA
	3.6 Extension Activities	40	50	60	50
	3.7 Collaboration	20	20	20	20
<b>Total</b>	<b>250</b>	<b>150</b>	<b>110</b>	<b>120</b>	
4. Infrastructure and Learning Resources	4.1 Physical Facilities	30	30	30	30
	4.2 Library as a Learning Resource	20	20	20	20
	4.3 IT Infrastructure	30	30	30	30
	4.4 Maintenance of Campus Infrastructure	20	20	20	20
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
5. Student Support and Progression	5.1 Student Support	30	30	50	50
	5.2 Student Progression	40	30	30	25
	5.3 Student Participation and Activities	20	30	50	45
	5.4 Alumni Engagement	10	10	10	10
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>140</b>	<b>130</b>
6. Governance, Leadership and Management	6.1 Institutional Vision and Leadership	10	10	10	10
	6.2 Strategy Development and	10	10	10	10
	6.3 Faculty Empowerment Strategies	30	30	30	30
	6.4 Financial Management and Resource Mobilization	20	20	20	20
	6.5 Internal Quality Assurance System	30	30	30	30
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
7. Institutional Values and Best Practices	7.1 Institutional Values and Social Responsibilities	50	50	50	50
	7.2 Best Practices	30	30	30	30
	7.3 Institutional Distinctiveness	20	20	20	20
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
	<b>TOTAL SCORE</b>	<b>1000 *</b>	<b>1000 *</b>	<b>1000 *</b>	<b>1000 *</b>

Note: \* In case of HEIs who exercise to opt for the weightage of  $\leq 3\%$  of Non Applicable Metrics, the total score will vary accordingly; (U) - applicable only for Universities and Autonomous Colleges; (A) - applicable only for the Affiliated / Constituent Colleges NA - Not Applicable



## Assessment Outcome

The final result of the Assessment and Accreditation exercise will be an ICT based score, which is a combination of evaluation of qualitative and quantitative metrics. This is compiled as a document comprising three parts.

### PART I - Peer Team Report

- Section 1: Gives the General Information of the institution and its context.
- Section 2: Gives Criterion-wise analysis based on peer evaluation of qualitative indicators. Instead of reporting with bullet points, this will be a **qualitative**, descriptive assessment report based on the Peer Team's critical analysis presenting strengths and weaknesses of HEI under each Criterion.
- Section 3: Presents an **Overall Analysis** which includes Institutional Strengths, Weaknesses, Opportunities and Challenges.
- Section 4: Records **Recommendations for Quality Enhancement of the Institution** (not more than 10 major ones).

### PART II - Graphical representation based on Quantitative Metrics (QnM)

This part is a System Generated Quality Profile of the HEI based on statistical analysis of quantitative indicators in the NAAC's QIF (quality indicator framework). Graphical presentation of institutional features is reflected through synthesis of quantifiable indicators.

### PART III - Institutional Grade Sheet

Contains the **Institutional Grade Sheet** which is based on qualitative indicators, quantitative indicators and student satisfaction survey using existing calculation methods, but it is generated by a software.

*The above three parts together forms "NAAC Accreditation Outcome" document. It is mandatory for the HEIs to display it on their institutional website apart from NAAC hosting it on its website.*

## Calculation of Institutional CGPA

The CGPA is calculated based on the scores obtained from the three sources, viz., The System Generated Scores (SGS) of the quantitative metrics, the scores from the qualitative metrics includes critical appraisal by the Peer Team through on site visit and the scores obtained on the Student Satisfaction Survey. These is collated through an automated procedure based on 'benchmarks' and assessed on a five-point scale, viz., (0, 1, 2, 3 & 4).



### The Final Grade

On the basis of the CGPA obtained by the institution in maximum possible score of 4.00, the final grade is assigned on a seven-point scale as shown in table 3.5. The seven point refers to the seven letter grades each aligned to the seven specific score range.

**Table 3.5 Institutional Grades and Accreditation Status**

Range of Institutional Cumulative Grade Point Average (CGPA)	Letter Grade	Status
3.51 - 4.00	A++	Accredited
3.26 - 3.50	A+	Accredited
3.01 - 3.25	A	Accredited
2.76 - 3.00	B++	Accredited
2.51 - 2.75	B+	Accredited
2.01 - 2.50	B	Accredited
1.51 - 2.00	C	Accredited
≤1.50	D	Not Accredited

Institutions which secure a CGPA equal to or less than 1.50 are notionally categorized under the letter grade “D”. Such unqualified institutions are intimated and notified by NAAC as “Assessed and Found not qualified for Accreditation”.

### Re-Assessment

Institutions, which would like to make an improvement in the accredited status, may volunteer for re-assessment, after completing at least one year, but not after the completion of three years. The option can be exercised only once in a cycle. Re-assessed institution cannot come for another re-assessment in the same cycle. The current procedures and methodology including the manual for the Assessment and Accreditation is applicable for all institutions applying for re-assessment. The fee structure and other process would be as per the current procedures of Assessment and Accreditation (more details can be obtained from NAAC website). Institutions that volunteer for re-assessment will not be eligible for fee waiver and reimbursement of accreditation expenses.

### Subsequent Cycles of Accreditation

The methodology for subsequent cycles of accreditation remains the same. However, due consideration would be given to the post-accreditation activities resulting in quality improvement, quality sustenance and quality enhancement. In the SSRs institutions opting



for subsequent cycles of accreditation need to highlight the significant quality sustenance and enhancement measures undertaken during the last four years. A functional Internal Quality Assurance Cell (IQAC) and timely submission of Annual Quality Assurance Reports (AQARs) are the Minimum Institutional Requirements (MIR) to volunteer for second, third or fourth cycle accreditation.

Institutions intending to be assessed to continue their accreditation need to apply afresh by submission of A&A application during the last six months of their validity period.

### **3.5 Motivation, Rational and Objectives of the Analysis**

The whole accreditation process of NAAC has been designed to enable Higher Education Institutions (HEIs) to re-discover themselves, their strength as well as their deficiencies and areas for improvement. The process also facilitates stakeholders to know and realize their latent potential. NAAC has accredited (as of 4<sup>th</sup> May 2020) 364 universities and 8166 colleges for Cycle I, 166 Universities and 3535 Colleges for Cycle II, 76 Universities and 1056 Colleges for Cycle III and 3 Universities and 44 Colleges for Cycle IV. Thus, the total number of accreditations done by NAAC is 13410 i.e. 609 Universities and 12801 Colleges.

In order to put the performance of accredited institutions in perspective, NAAC decided to analyze (quantitatively and qualitatively) the peer team reports at the State level. Since a significant number of universities (32) and colleges (1711) in Maharashtra have been so far accredited, it gives sufficient data for the critical analysis of the accredited institutions. The present analysis is carried out with a view to identify strengths, weaknesses and common issues of the accredited institutions in Maharashtra and suggest possible solutions/recommendations for their further qualitative development. The main objectives of the analysis are:

- To help management and staff to evolve practices for improved institutional performance.
- To provide inputs to the policy makers to evolve appropriate policies for quality enhancement and quality sustenance of the higher education system.
- To provide feedback to the stakeholders.
- To provide inputs to the funding and regulatory councils, to arrive at more informed planning and policy decisions.
- To provide inputs to the NAAC, further improvement of the process and developing benchmarks.





### 3.6 Procedure/ Methodology of Analysis and Format of the Report

In this report, both quantitative and qualitative techniques (based on the recommendation, commendation, etc. as mentioned in each peer team report) have been applied for analysis. The criterion-wise scores and overall weighted scores are taken as comparable data for quantitative analysis. For the convenience of analysis and to get a comparable picture, the accredited institutions are grouped into (i) Universities and (ii) Colleges. Colleges are further grouped into clusters based on the following criteria:

1. Grades (on the basis of Grades scored by the colleges)
2. Types of colleges (Government & Government-aided Colleges, and Self – financed Colleges)
3. Gender (Co-educational Colleges and Women Colleges)
4. Region (Rural Colleges and Urban Colleges)

Comparison of the accredited institutions as per the profiles was also attempted. The data both quantitative and qualitative - has been collected from PTRs and the missing links have been obtained from the institutional websites, SSRs, Annual Quality Assurance Reports and other materials available from NAAC and the HEIs. While carrying out the qualitative analysis, under each criterion, key/core indicators identified as noted in Section 1.6 will be the focus of study/analysis.

It is presumed that the inter – peer team variation in the scored and the PTRs is minimal and that the commendations, recommendations and concerns mentioned in the PTRs truly reflect the overall institutional situations and of the duly validated Self –study Reports (SSR).

### 3.7 Status of Accredited Institutions of Maharashtra

**Maharashtra state has been a leading State in the field of education.** State has the tradition of sustained engagement with the process of social reforms and empowerment of people through creating wider access to education. There are several examples where new initiatives that emerged in Maharashtra were later on adopted in the country as a whole. Maharashtra has always been in the lead relating to Higher Education and this has a lot to do with priority to education being an articulated and key focus of leaders as well as society at large. The state readily responded to call of UGC and NAAC for assessment and accreditation of Higher Educational Institutions. Shreemati Nathibai Damodar Thackersey Women's University was the first university from Maharashtra to get accreditation from NAAC in 2000. There were two colleges in Maharashtra who got first accreditation in college category namely KEJ's Vinayak Vaze College (1999) and SVT College of Home Science, Mumbai (1999) from NAAC. As on May 2020, 32 Universities and 1711 colleges have been accredited in the state, so far.





In Maharashtra, there are several categories of Higher Education Institutions depending on source of funding and management criteria:

**[1] Centrally Funded Universities:** Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha, which have established by an Act of Parliament. They cater to a large number of State and migrant students from other parts of the country and the world.

**[2] State Funded Universities:** In Maharashtra, State University includes State Public University, State Private University and State Open University. Fully established and managed by State Government under Maharashtra Universities Act, 1994. These have stand-alone campuses as well as constituent or affiliated colleges. They are affiliating and examination conducting bodies.

a) **Government Degree Colleges:** Established and Managed by State Government. Cost of infrastructure and staff salary is borne by State Government.

b) **Government Aided Colleges:** Established by Private management as per affiliation norms and governed by State Government. Only staff salary is borne by the State Government. In some of these colleges there are self-financed courses as well.

**(3) Deemed University:** An Institution of Higher Education, other than universities, working at a very high standard in specific area of study, can be declared as Deemed Universities by the Central Government on the advice of the UGC. In Maharashtra, there are three categories of deemed university- Deemed University-Government, Deemed University-Government-aided and Deemed University-Private which enjoy academic status and privileges of a university.

**(4) Institutes of National Importance:** is a status that may be conferred on a premier public higher education institution in India by an act of Parliament of India, an institution which "serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state.

The following table contains the details of 30 accredited universities in Maharashtra.

**Table 3.6 List of Accredited Universities**

Sl. No.	Name of the University	Grade
1	Bharati Vidyapeeth University, Pune	A+
2	Datta Meghe Institute of Medical Sciences, Wardha	A+
3	Deccan College Post-Graduate and Research Institute, Pune	A
4	Defence Institute of Advanced Technology, Pune	B





5	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	A
6	Dr. Babasaheb Ambedkar Technological University, Raigad	B
7	D. Y. Patil Education Society, Kolhapur	A
8	D.Y. Patil University, Navi Mumbai	A
9	Dr. D.Y. Patil Vidyapeeth, Pune	A
10	Gokhale Institute of Politics and Economics, Pune	A
11	Homi Bhabha National Institute, Mumbai	A
12	Indira Gandhi Institute of Development Research, Mumbai	B+
13	Institute of Chemical Technology, Mumbai	A++
14	Kavikulaguru Kalidas Sanskrit University, Nagpur	B++
15	Krishna Institute of Medical Science, Karad	A
16	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha	A
17	North Maharashtra University, Jalgaon	A
18	Pravara Institute of Medical Sciences, Ahmednagar	A
19	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	A
20	Sant Gadge Baba Amravati University, Amravati	A
21	Savitribai Phule Pune University, Pune	A+
22	Shreemati Nathibai Damodar Thackersey Women's University, Mumbai	A
23	Shivaji University, Kolhapur	A
24	Solapur University, Solapur	B
25	SVKM's Narsee Monjee Institute of Management Studies, Mumbai	A+
26	Swami Ramanand Teerth Marathwada University, Nanded	A
27	Symbiosis International University, Pune	A
28	Tata Institute of Social Sciences, Mumbai	A
29	Tata Institute of Fundamental Research, Mumbai	A+
30	Tilak Maharashtra Vidyapeeth, Pune	B++

As on May 2020, NAAC has undertaken the accreditation and assessment of 32 Universities and 1711 Colleges in Maharashtra. Out of these 30 Universities and 1367 Colleges are considered for the statistical analysis (Tables 3.7 and 3.8). The detailed analysis of universities and colleges are given chapter 4.





Table 3.7 University-wise number of Affiliated Accredited Colleges

Sl. No.	University Name*	Total no. of Colleges	No. of Colleges who has submitted SSR	No. of HEI's Accredited
1	University of Mumbai, Mumbai	808	93	251
2	Savitribai Phule Pune University, Pune	803	200	329
3	The Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	473	80	155
4	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	428	32	103
5	Maharashtra University of Health Sciences, Nashik	356	2	11
6	Sant Gadge Baba Amravati University Amravati	314	61	118
7	Shivaji University, Kolhapur	296	58	129
8	Swami Ramanand Teerth Marathwada University, Nanded	272	20	81
9	Gondwana University, Gadchiroli	175	25	40
10	Kavayitri Bahinabai Chaudhari North Maharashtra University	174	34	80
11	Smt. Nathibai Damodar Thackersey Women's Univeristy, Mumbai	141	11	24
12	Punyashlok Ahilyadevi Holkar Solapur University, Solapur	93	16	38
13	Dr. Babasaheb Ambedkar Technological University, Raigad	75	18	7
14	Dr. D.Y. Patil Vidyapeeth, Pune	10	0	2
15	Jawahar Lal Nehru University New Delhi	2	0	1

Note: \* provides the information about the affiliated colleges in the respective university.



Table 3.8 Grade-wise number of Affiliated Colleges under CGPA System

Sl. No.	University Name*	Grades							Total
		A	A+	A++	B	B+	B++	C	
1	Sant Gadge Baba Amravati University Amravati	17	-	-	58	15	14	14	118
2	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	18	1	-	55	14	9	6	103
3	Dr. Babasaheb Ambedkar Technological University, Lonere	-	-	-	2	4	1	-	7
4	Dr. D.Y. Patil Vidyapeeth, Pune	2	-	-	-	-	-	-	2
5	Gondwana University, Gadchiroli	2	-	-	20	2	5	11	40
6	Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon	14	2	-	38	14	6	6	80
7	University of Mumbai, Mumbai	85	12	-	68	46	24	16	251
8	Jawahar Lal Nehru University, New Delhi	1	-	-	-	-	-	-	1
9	Maharashtra University of Health Sciences, Nashik	5	-	-	2	-	4	-	11
10	Rashtrasant Tukodji Maharaj Nagpur University, Nagpur	32	7	-	62	21	18	15	155
11	Savitribai Phule Pune University, Pune	93	15	3	102	55	43	18	329
12	Punyashlok Ahilyadevi Holkar Solapur University, Solapur	7	2	-	13	8	4	4	38
13	SNDT Women's University, Mumbai	5	1	-	7	5	3	3	24
14	Swami Ramanand Teerth Marathwada University, Nanded	8	1	-	41	15	7	9	81
15	Shivaji University, Kolhapur	35	6	-	39	26	14	9	129

Note: \* provides the information about the affiliated colleges in the respective university.



## Chapter – 4

# Quantitative Analysis

### 4.1 Introduction

Maharashtra is recognised as a progressive and a state among high percentage of literates. The state has a strong network of private and public institutions with a long history in literacy movements. Presently there are 64 universities and 4780 colleges in the state. Out of these, the performance of only 30 Universities and 1367 Colleges have been selected for the analysis purpose. Following the standard time-tested procedures, assessment of the selected institutions has been carried out using seven criteria. Analyses of the quantitative & qualitative data available from these assessments is attempted here using statistical methodology with an intention to understand the status of these institutions as depicted through the lens of the assessments teams.

The statistical analysis is mainly based on weighted averages of seven performance evaluation criteria and overall scores and grades allotted to individual institutions and the qualitative indicators such as location/regions/sub-regions, source of funding, types of colleges, programmes/disciplines etc. The sample selected for the analysis included, institutions with a valid accreditation from NAAC, irrespective of their accreditation cycles or period of validity (5-7 years). We have also tried to assess the performance of selected institutions using Criterion Grade Points [Weighted] Averages (CGPA) of the current as well as previous accreditation cycles to highlight their relative performance over the periods of or accreditation cycles.

### 4.2 Analysis of the Accredited Universities

The latest data accessed from web portal of Annual Survey of Higher Education (<https://rb.gy/fv34q3>, March, 2020) indicates that there are 64 universities in Maharashtra, among these 22 are State funded Public Universities (34.4%) and 21 Deemed Universities (32.8%). These together cover almost 2/3 of the total number of universities in the State (Table 4.1). Private State Universities and Institutes of National Importance formed 30% of the total universities in the State with nominal presence of Central University (1) and State Open University (1). Out of these 64 universities, only 32 universities have gone for NAAC accreditation, but currently 30 (46.88%) have valid accreditation. Notably, Deemed Universities have shown comparatively greater interest in NAAC accreditation process than the State Public Universities. The difference reflects in their accreditation rates of Deemed Universities (85.71%) and State Public Universities (50%). The State Private & State Open



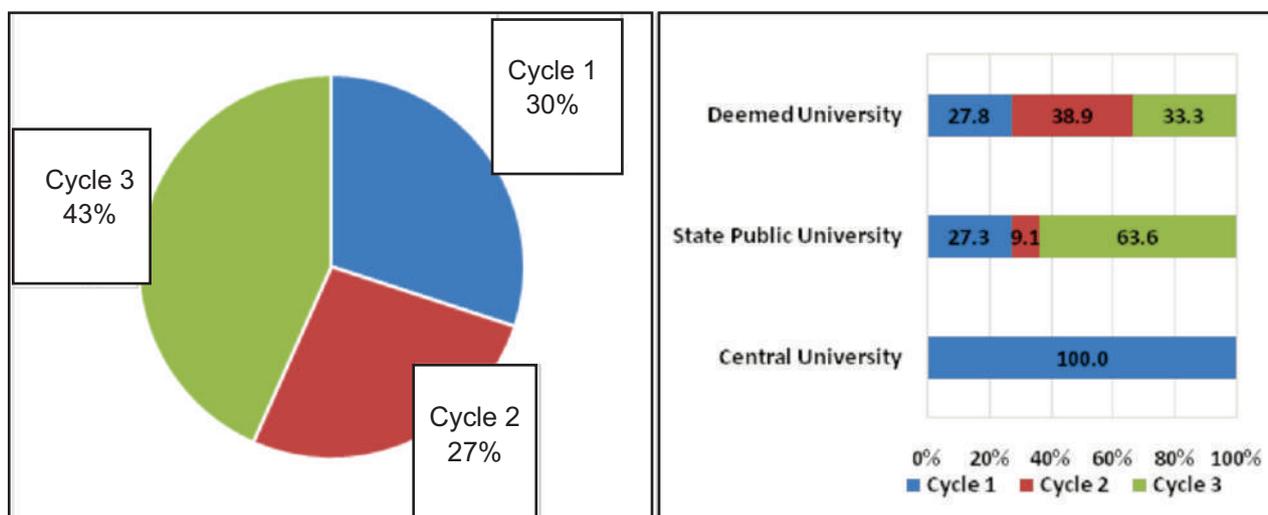
Universities and Institutes of National Importance as on March 31<sup>st</sup>, 2020 have not shown any interest and have remained out of accreditation process.

**Table 4.1 Number of Universities and Overall Accreditation Status in Maharashtra**

Sl. No.	University Type	Total Number		Accredited	
		Number	%	Number	% to total
1	Central University	1	1.56	1	100.00
2	State Universities	22	34.38	11	50.00
3	State Open Universities	1	1.56	-	-
4	State Private Universities	11	17.19	-	-
5	Deemed Universities	21	32.81	18	85.71
6	Institutes of National Importance	8	12.50	-	-
<b>Total</b>		<b>64</b>	<b>100.00</b>	<b>30</b>	<b>46.88</b>

Source: Author's estimates based on Annual Survey of Higher Education, 2020, UGC (2020); accessed from <https://rb.gy/fv34q3> on 3<sup>rd</sup> March 2020 and NAAC Database on Accredited Institutions.

The information on the current status of accreditation cycles of universities helps us to identify the trend in the participation of institutions and continuity of interest in the accreditation process over the period of time. The universities with a greater number of cycles of accreditation signify longer duration of association and continuity of interest in the accreditation process. There are 13 (43%) universities currently appearing for their third cycle of accreditation are in fact the ones who took a lead in accreditation in the State between the period of 1999 to 2007 (Fig. 4.1). This was followed by the remaining 8 (27%) and 9 (30%) universities in their second and first cycles of accreditation obtaining NAAC accreditation in the subsequent periods - 2009 to 2012 and 2015 to 2017.



**Fig. 4.1: Accreditation Cycles among the selected Universities**

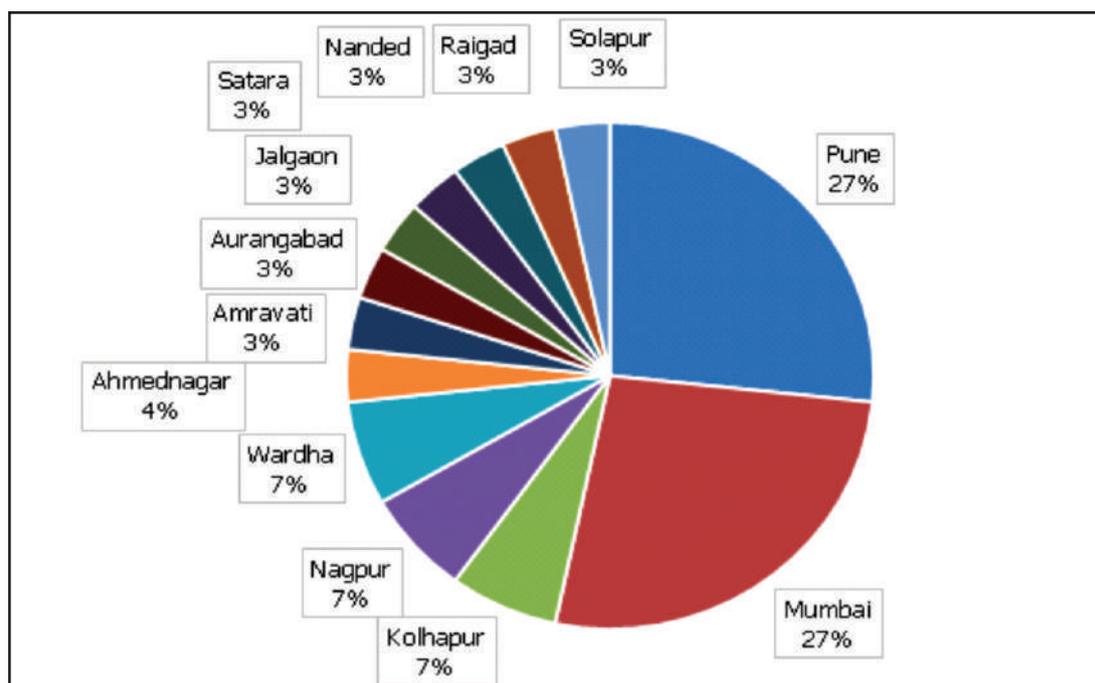


Among the accredited universities have taken an early lead in NAAC accreditation particularly in 1999 to 2007 primarily included State Public Universities (63.6%) followed by Deemed Universities (33.3%). In the subsequent period (2009 to 2012), Deemed universities exhibited a significant enthusiasm in the accreditation process with an addition of 38.9% points as compared to the State Public Universities (9.1% point). In the recent phase, a greater number of universities have sought accreditation from NAAC. This is clearly demonstrated by the higher proportion of Deemed Universities (27.8%), State Public Universities (27.3%) and Central University (100%) having their first cycle of accreditation from NAAC.

The distribution of accredited universities by types across locations and districts are given in Table 4.2 and Fig. 4.2. The distribution of universities across locations clearly demonstrates that the universities in Maharashtra are largely urban centric with almost 83% universities (90% including semi-urban) are in urban areas and only 10% universities (3) are located in rural areas.

**Table 4.2 Location and Types of Accredited Universities in Maharashtra**

Sl. No.	Locations/Type	Central Universities	State Universities	Deemed Universities			All	All
				Govt.-aided	Govt.	Private		
1	Rural	-	1	-	-	2	2	3
2	Semi-urban	-	2	-	-	-	-	2
3	Urban	1	8	2	5	9	16	25
<b>Total</b>		<b>1</b>	<b>11</b>	<b>2</b>	<b>5</b>	<b>11</b>	<b>18</b>	<b>30</b>



**Fig. 4.2: Percentage of Accredited Universities across Districts in Maharashtra**





When we look at their distribution across the districts, almost 52% of the total accredited universities are found in Pune and Mumbai, and districts of Western Maharashtra (including Kohlapur, Satara, Raigad, Solapur, Mumbai, and Thane) constitute 61% of total accredited universities in the State (Fig. 4.2). Nagpur, Kolhapur and Wardha districts have two universities each and the remaining districts have 1 university each.

All the universities are accredited and evaluated as per CGPA system. Table 4.3 and Fig. 4.3 give ranking of accredited universities in the Maharashtra based on their performance assessment scores (CGPAs). Table 4.1, however, in addition to CGPA scores also provides seven criteria-based scores and grade points obtained by the accredited universities.

**Table 4.3 Distributions of Universities as per Quality Performance Scores & Grades**

Rank	Name of the University	Status	C1	C2	C3	C4	C5	C6	C7	CGPA	Grades
1	Tata Institute of Social Sciences, Mumbai	DU**	3.87	4.00	4.00	3.70	4.00	3.40	4.00	3.89	A
2	Institute of Chemical Technology, Mumbai	DU*	3.87	3.85	4.00	3.40	4.00	3.10	3.70	3.77	A++
3	Tata Institute of Fundamental Research, Mumbai	DU*	3.33	3.80	3.76	4.00	3.40	3.40	4.00	3.68	A+
4	Dr. D.Y. Patil Vidyapeeth, Pune	DU	3.67	3.70	3.36	4.00	3.60	3.90	3.40	3.62	A
5	Savitribai Phule Pune University, Pune	SPU	3.33	3.85	3.68	3.60	3.40	3.40	3.70	3.60	A+
6	SVKM's Narsee Monjee Institute of Management Studies, Mumbai	DU	3.67	3.45	3.40	4.00	3.60	3.70	3.70	3.59	A+
7	Symbiosis International University, Pune	DU	3.87	3.60	3.20	3.80	3.60	3.70	3.70	3.58	A
8	Homi Bhabha National Institute, Mumbai	DU*	3.87	3.35	3.52	3.80	3.20	3.00	4.00	3.53	A
9	Bharati Vidyapeeth University, Pune	DU	3.33	3.70	3.28	3.80	4.00	3.30	3.60	3.53	A+
10	Datta Meghe Institute of Medical Sciences, Wardha	DU	3.67	3.60	3.52	3.60	3.40	3.50	3.30	3.53	A+
11	D.Y. Patil University, Nerul, Navi Mumbai	DU	3.67	3.55	3.08	3.80	3.20	3.40	3.30	3.40	A
12	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	SPU	3.73	3.21	2.71	3.48	3.52	3.18	3.19	3.22	A
13	Krishna Institute of Medical Science, Karad	DU	3.66	3.20	2.76	3.40	3.60	3.20	3.00	3.20	A
14	D. Y. Patil Education Society, Kolhapur	DU	3.00	3.25	3.20	3.60	3.00	3.40	3.00	3.20	A





Rank	Name of the University	Status	C1	C2	C3	C4	C5	C6	C7	CGPA	Grades
15	Pravara Institute of Medical Sciences, Loni, Rahata, Ahmednagar	DU	3.00	3.25	3.16	3.80	3.00	3.10	3.90	3.17	A
16	Deccan College Post-Graduate and Research Institute, Pune	DU	2.87	3.20	2.92	3.50	4.00	3.10	3.00	3.16	A
17	Shivaji University, Kolhapur	SPU	3.00	3.20	3.80	3.60	3.00	3.40	3.00	3.16	A
18	Rashtasant Tukadoji Maharaj Nagpur University, Nagpur	SPU	2.87	3.15	3.16	2.90	3.20	3.20	3.00	3.08	A
19	S.N.D.T. Women's University Mumbai	SPU	2.87	3.15	3.16	3.00	3.60	2.70	3.00	3.08	A
20	Gokhale Institute of Politics & Economics, Pune	DU**	3.33	3.15	3.28	3.20	2.60	2.70	2.70	3.07	A
21	Sant Gadge Baba Amravati University, Amravati	SPU	2.87	3.20	2.84	3.70	3.00	2.90	3.30	3.07	A
22	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha	CU	3.70	2.85	3.44	3.30	3.00	2.40	3.00	3.06	A
23	Swami Ramanand Teerth Marathwada University, Nanded	SPU	2.67	3.45	3.00	2.80	3.00	3.40	3.00	3.06	A
24	Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon	SPU	2.87	3.20	3.08	2.70	3.20	3.20	3.00	3.05	A
25	Tilak Maharashtra Vidyapeeth, Pune	DU	3.00	2.89	2.76	2.97	3.22	2.56	2.89	2.88	B++
26	Defence Institute of Advanced Technology, Pune	DU*	3.00	3.15	2.68	2.80	3.00	2.60	2.70	2.86	B
27	Kavikulaguru Kalidas Sanskrit University, Ramtek, Nagpur	SPU	2.80	3.25	2.56	2.70	3.00	3.00	2.70	2.85	B++
28	Indira Gandhi Institute of Development Research, Mumbai	DU*	3.64	3.27	1.27	3.46	2.87	2.64	3.23	2.75	B+
29	Punyashlok Ahilyadevi Holkar Solapur University, Solapur	SPU	2.53	2.75	2.72	2.50	2.80	2.50	2.30	2.62	B
30	Dr. Babasaheb Ambedkar Technological University Raigad	SPU	2.80	2.15	2.16	2.00	3.00	2.20	2.30	2.35	B

Note:\$ = Mismatch between pattern of scores and Grades due to slight changes in 'Grades system (please refer chapter 3); SPU = State Public University; CU = Central University; DU= Deemed University Private; DU\* = Deemed University Govt; DU\*\* = Deemed University - Govt Aided ; Criteria:- C1-Curricular Aspects; C2-Teaching-Learning and Evaluation; C3-Research, Innovation and Extension; C4-Infrastructure and Learning Resources; C5-Student Support and Progression; C6-Governance, Leadership and Management; C7-Institutional Values and Best Practices; CGPA = Cumulative Grade Point Average.





**Fig. 4.3: Distributions of Universities as per CGPA System**

As far as overall performance and ranking of the universities is concerned, Government and Government-aided Deemed universities, such as Tata Institute of Social Science, Mumbai, Institute of Chemical Technology, Mumbai and Tata Institute of Fundamental Research Mumbai ranks among the top three universities with CGPAs ranging from 3.68 to 3.89 points. Among the top 10 accredited universities, only one State Public University, Savitribai Phule Pune University appears at the 5<sup>th</sup> rank with A+ Grade and 3.60 CGPA point. Notably, Deemed Universities take a lead in ranking and overall performance in the State. Baring Savitribai Phule Pune University and Dr. Babasaheb Ambedkar Marathwada University,



Aurangabad, all other State Public Universities are below the mean and median level scores of CGPA of the State.

Table 4.3 also provide information on grade points of the respective universities. There is only 1 university in the State which has received 'A++' grade, followed by 5 universities receiving 'A+' and 18 universities 'A' grade points. Among the average performing universities, 2 universities have received 'B++', 1 university 'B+' and remaining 3 universities, 'B' grade. The CGPAs of these six universities range from 2.35 to 2.88 points. These universities will have to step up their performance in – a) infrastructure & learning resources, b) research, innovations & extension, c) institutional values and best practices, and d) governance, leadership & management to catch up with other universities. Deemed Universities, in general show relatively better performance in terms of achieving higher grade (A to A++). Almost 83.3% of Deemed Universities in the State have received grade points between A to A++ as compared to 72% found in the case of Public Universities. The State Public Universities clearly fall short in giving matching response to the Deemed Universities particularly in the areas of infrastructure & learning resources, curriculum aspects and institutional values and best practices.

From the descriptive statistics given in table 4.4 (a), the following observations are noted – a) irrespective of type of universities, we find significant gaps in minimum and maximum scores in evaluation criteria - Research, innovations and extension, Infrastructure & learning resources, Institutional values and best practices and Governance, leadership & management. The issues can be addressed by focusing on six universities receiving with grade 'B to B++' b) The overall variation within groups, represented by co-efficient of variation (CV) for all the criteria scores of both the universities found to be in reasonable level (within 8% to 19%) but can be brought under 10%. Deemed universities, however, have done better in maintaining lower variation across all the criteria scores, except research and student support, c) Deemed universities also show better performance in the all the seven and overall score of assessments, d) on an average, both accredited Universities in State have improved their overall performance (CGPA) by 4.97% over the previous cycles of accreditation. The State Public Universities, in this regard, however, have shown much better performance (8.64%) than Deemed Universities (3.87%). The State Public Universities have improved their average CGPA from 2.75 point in earlier cycles of accreditation to 3.01 point in the current cycles of accreditation. Whereas, the Deemed Universities show marginal improvement in their scores from 3.23 to 3.36 points during these accreditation cycles, and e) the accredited universities have shown a remarkable performance in reducing overall variability/CV (-39.75%) during the two assessment periods.



Table 4.4 (a) Descriptive Statistics

University Status	Descriptive Statistics	Curricular Aspects	Teaching-Learning and Evaluation	Research, Innovations and Extension	Infra-structure and Learning Resources	Student Support and Progression	Governance, Leadership & Management	Institutional Values and Best Practices	CGPA (Latest Cycle)	CGPA Earlier Cycle	% Δ in CGPAs
1	Central	3.70	2.85	3.44	3.30	3.00	2.40	3.00	3.06	-	-
	University	3.70	2.85	3.44	3.30	3.00	2.40	3.00	3.06	-	-
2	State Public	2.94	3.14	2.99	3.00	3.16	3.01	2.95	3.01	2.75	8.64
	University	11.18	13.35	15.86	18.02	8.02	13.23	13.80	10.73	12.38	-15.38
	Min	2.53	2.15	2.16	2.00	2.80	2.20	2.30	2.35	2.11	10.21
	Median	2.87	3.20	3.00	2.90	3.00	3.18	3.00	3.07	2.85	7.17
3	Max	3.73	3.85	3.80	3.70	3.60	3.40	3.70	3.60	3.10	13.89
	Deemed	3.46	3.44	3.18	3.59	3.41	3.21	3.40	3.36	3.23	3.87
	University	10.31	8.64	19.24	9.54	12.57	12.32	13.19	9.89	14.36	-45.20
	Min	2.87	2.89	1.27	2.80	2.60	2.56	2.70	2.75	2.13	22.55
Total	Median	3.65	3.40	3.24	3.65	3.40	3.25	3.35	3.47	3.35	3.46
	Max	3.87	4.00	4.00	4.00	4.00	3.90	4.00	3.89	3.88	0.26
	Mean	3.28	3.31	3.12	3.36	3.30	3.11	3.22	3.22	3.06	4.97
	CV (%)	13.03	11.36	17.82	14.93	11.63	13.39	14.65	11.17	15.61	-39.75
Total	Min	2.53	2.15	1.27	2.00	2.60	2.20	2.30	2.35	2.11	10.21
	Median	3.33	3.25	3.16	3.49	3.20	3.19	3.10	3.17	3.10	2.21
	Max	3.87	4.00	4.00	4.00	4.00	3.90	4.00	3.89	3.88	0.26

Note - CV = Co-efficient of Variation



To test the validity of some of the observations made above, we have presented the results of independent sample 't' test in Table 4.4 (b). We assume that there is no difference in average performance scores (CGPAs) of State Public Universities and Deemed Universities and any observed differences in the mean scores are attributed to mere chance. The results indicate statistically significant differences at probability levels of 1%, 5% & 10% for the evaluation criteria- 'Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Institutional Values and Best Practices and Overall Performance (CGPA), indicating that there are significant differences in mean values of performance scores/indicators between the State Public Universities and Deemed Universities. As far as mean values of Research, Innovations and Extension and Governance, Leadership & Management scores are concerned, the difference in performance was not statistically significant leading to a conclusion that the differences in mean values are not attributed to the type of universities.

**Table 4.4 (b) Criteria-wise Performance of Universities**

	Group Statistics	Status	Mean	Std. Dev	Assumption	Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	SPU	3.00	0.382	$H_0: \sigma_1^2 = \sigma_2^2$	0.12	NSS	-3.35	28	***
		DU	3.46	0.357	$H_a: \sigma_1^2 \neq \sigma_2^2$			-3.31	23	***
C2	Teaching-Learning and Evaluation	SPU	3.12	0.409	$H_0: \sigma_1^2 = \sigma_2^2$	0.03	NSS	-2.52	28	**
		DU	3.44	0.298	$H_a: \sigma_1^2 \neq \sigma_2^2$			-2.37	19	**
C3	Research, Innovations & Extension	SPU	3.03	0.470	$H_0: \sigma_1^2 = \sigma_2^2$	0.07	NSS	-0.72	28	NSS
		DU	3.18	0.611	$H_a: \sigma_1^2 \neq \sigma_2^2$			-0.75	27	NSS
C4	Infrastructure and Learning Resources	SPU	3.02	0.523	$H_0: \sigma_1^2 = \sigma_2^2$	3.39	*	-3.60	28	***
		DU	3.59	0.343	$H_a: \sigma_1^2 \neq \sigma_2^2$			-3.32	17	***
C5	Student Support and Progression	SPU	3.14	0.246	$H_0: \sigma_1^2 = \sigma_2^2$	4.25	**	-1.91	28	*
		DU	3.41	0.428	$H_a: \sigma_1^2 \neq \sigma_2^2$			-2.12	28	**
C6	Governance, Leadership and Management	SPU	2.96	0.418	$H_0: \sigma_1^2 = \sigma_2^2$	0.14	NSS	-1.65	28	NSS
		DU	3.21	0.395	$H_a: \sigma_1^2 \neq \sigma_2^2$			-1.63	23	NSS
C7	Institutional Values and Best Practices	SPU	2.96	0.389	$H_0: \sigma_1^2 = \sigma_2^2$	1.80	NSS	-2.76	28	***
		DU	3.40	0.448	$H_a: \sigma_1^2 \neq \sigma_2^2$			-2.84	26	***
CGPA		SPU	3.02	0.309	$H_0: \sigma_1^2 = \sigma_2^2$	1.32	NSS	-2.82	28	***
		DU	3.36	0.332	$H_a: \sigma_1^2 \neq \sigma_2^2$			-2.86	25	***



Note: Total number of samples 18; Public Universities (PU) =12; Deemed Universities (DU) = 18; NSS= Estimates are not statistically significant; Estimates are statistically significant at \*\*\*(1%); \*\* (5%); \*(10%)

As we have noted earlier, out of 64 universities, only 30 universities have gone for the NAAC accreditation. However, two universities, University of Mumbai and MGM Institute of Health Science, both based in Mumbai, whose accreditation period got over in 2017 & 2019 respectively, have not applied for re-accreditation by NAAC [Table 4.5 (a)]. Similarly, there are 8 universities whose validity of accreditation is upto September, 2019 December, 2019 and March 2020, are yet to apply for re-accreditation [Table 4.5(b)]. The list of non-accredited universities in Maharashtra is presented in 4.6 (c).

**Table 4.5 (a) Non-reaccredited Universities**

Sl. No.	Name of the University	Date of Certificate
1	University of Mumbai, Mumbai	11/04/2012
2	MGM Institute of Health Science, Navi Mumbai	21/02/2014

**Table 4.5 (b) Accreditation validity expiring date of Universities**

Sl. No.	Name of the University	Status	Accreditation Valid Up to
1	Swami Ramanand Teerth Marathwada University, Nanded	SPU	09/12/2019
2	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	SPU	09/12/2019
3	Shivaji University, Kolhapur	SPU	09/12/2019
4	D.Y. Patil University, Nerul, Navi Mumbai	DU	09/12/2019
5	Dr. D.Y. Patil Vidyapeeth, Pune	DU	02/03/2020
6	Deccan College Post-Graduate and Research Institute, Pune	DU	02/03/2020
7	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha	CU	02/03/2020
8	Dr. Babasaheb Ambedkar Technological University, Raigad	SPU	02/03/2020



Table 4.5 (c) The Non-accredited Universities in Maharashtra

Sl. No.	University Name	University Type	Specialisation
1	Central Institute of Fisheries Education Fisheries University, Mumbai	Deemed University Govt.	Fisheries
2	International Institute for Population Sciences Mumbai	"	General
3	Indian Institute of Technology, Mumbai	Institute of National Importance	Technical
4	All India Institute of Medical Science Nagpur	"	Medical
5	Indian Institute of Information Technology, Nagpur	"	Technical
6	Indian Institute of Management, Nagpur	"	General
7	Visvesvaraya National Institute of Technology Nagpur	"	Technical
8	Indian Institute of Information Technology, Pune	"	Technical
9	Indian Institute of Science Education & Research, Pune	"	Science
10	National Backward Krushi Vidyapeeth, Solapur	"	Agriculture
11	Yashwantrao Chavan Maharashtra Open University	State Open University	General
12	Mahatma Phule Krishi Vidyapeeth, Rahuri State	Public University	Agriculture
13	Dr. Punjarao Deshmukh Krishi Vidyapeeth, Akola	"	Agriculture
14	Maharashtra National Law University, Aurangabad	"	Law
15	Gondwana University, Gadchiroli	"	General
16	Maharashtra National Law University Mumbai	"	Law
17	Maharashtra Animal & Fishery Sciences University Nagpur	"	Animal & Fishery Sciences
18	Maharashtra National Law University, Nagpur	"	Law
19	Maharashtra University of Health Sciences, Nashik	"	Medical
20	Vasantrao Naik Marathwada Agricultural University, Parbhani	"	Agriculture
21	Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth (former Konkan Krishi Vidyapeeth) Ratnagiri	"	Agriculture
22	Sanjay Ghodawat University, Kolhapur	State Private University	General
23	Sandip University, Nashik	"	General
24	Ajeenkya D Y Patil University	"	General
25	Dr. Vishwanath Karad MIT World Peace University	"	General
26	D Y Patil International University	"	General



27	MIT Art, Design and Technology University, Pune	“	General
28	Spicer Adventist University	“	General
29	Symbiosis Skills and Open University	“	Skills
30	Vishwakarma University	“	General
31	Amity University, Mumbai	“	General
32	Chhatrapati Shivaji Maharaj University	“	General

### 4.3 Analysis of Colleges

As per the latest database of UGC on Annual Survey of Higher Education, 2020 (AISHE website), there are 4780 affiliated colleges (including constituents & off-campus and recognised centres) and 2392 Standalone colleges in Maharashtra. Out of these, only 1711 colleges have been accredited as on 31<sup>st</sup> May 2020. However, for the analysis purpose, we have chosen 1367 accredited colleges only. This section analyses the performance of these accredited colleges using seven criteria and overall CGPA scores in relation to some qualitative indicators discussed in the previous section.

#### 4.3.1 Distribution of Accredited Colleges across Locations

The distribution of accredited colleges across locations, divisions and districts are provided Fig. 4.4 and in tables 4.6 (a) & 4.6 (b). From Fig. 4.4, it can be observed that almost 43.9% of accredited colleges are located in Urban areas followed by 40.82% in the rural areas. The semi-urban areas accounted for 12.36% of total accredited colleges and small fraction of colleges (2.93%) found in tribal areas. The distribution pattern observed on the State level, however, do not replicate on administrative divisions and districts levels (Tables 4.6(a) & 4.6 (b)).

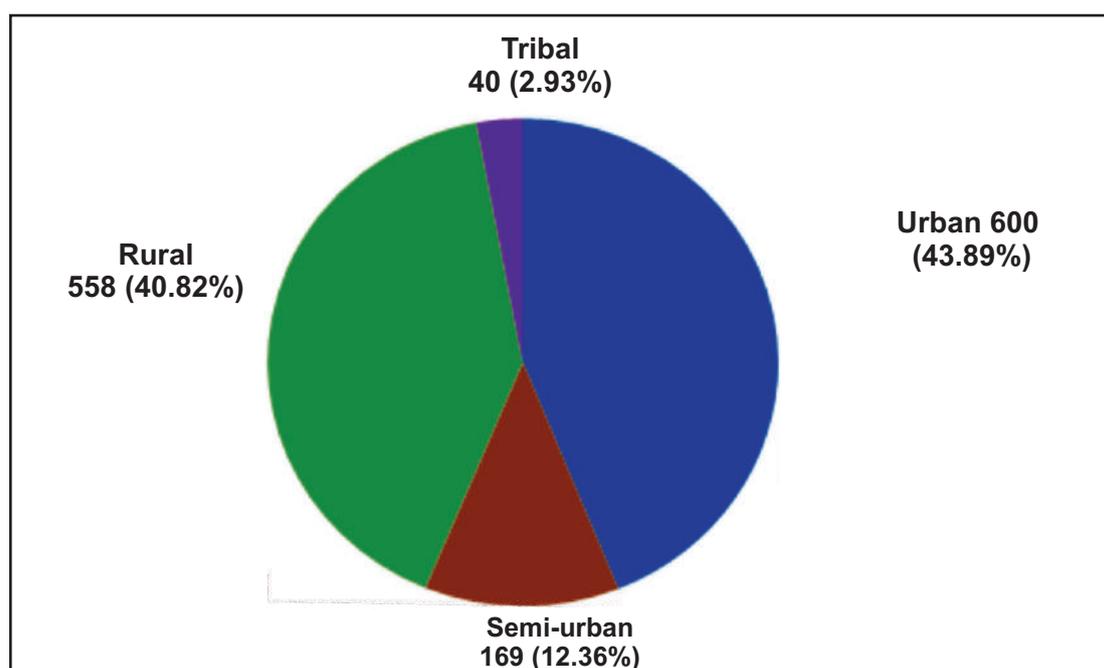


Fig. 4.4: Distribution of Accredited Colleges across Locations



The distribution of colleges across divisions are heavily lopsided towards urban areas, particularly Konkan and Pune divisions. The proportion of accredited colleges located in urban areas found to be 62.12% and 54.7% respectively in Konkan Pune divisions. On the contrary, Amravati, Aurangabad, Nagpur and Nashik divisions relatively have higher shares of accredited colleges located in rural areas. The proportions of the colleges located in the rural areas are well above (45% to 57.5%) the state average (40.82%). The proportion of accredited colleges in semi-urban areas are normally distributed. In case of tribal locations, the proportion of accredited colleges in Nagpur, Amravati and Nashik divisions found to quite high. These divisions have higher proportion of tribal population in the state.

**Table 4.6 (a) Distribution of Accredited Colleges across Locations & Divisions**

Sl. No.	Divisions	Urban	Semi-urban	Rural	Tribal	Total
1.	Amravati	26 (21.67)	19 (15.83)	69 (57.50)	6 (5.00)	120 (100.00)
2.	Aurangabad	43 (23.12)	35 (18.82)	105 (56.45)	3 (1.61)	186 (100.00)
3.	Konkan	164 (62.12)	27 (10.23)	69 (26.14)	4 (1.52)	264 (100.00)
4.	Nagpur	83 (42.78)	15 (7.73)	87 (44.85)	9 (4.64)	194 (100.00)
5.	Nashik	63 (31.66)	25 (12.56)	95 (47.74)	16 (8.04)	199 (100.00)
6.	Pune	221 (54.70)	48 (11.88)	133 (32.92)	2 (0.50)	404 (100.00)
<b>Maharashtra State</b>		<b>600</b> <b>(43.89)</b>	<b>169</b> <b>(12.36)</b>	<b>558</b> <b>(40.82)</b>	<b>40</b> <b>(2.93)</b>	<b>1367</b> <b>(100.00)</b>

Note: 1) Figures in parenthesis are percentages to Total; 2) Administrative Divisions includes the following districts – Amravati Division = Amravati, Akola, Buldhana, Washim & Yavatmal; Aurangabad Division = Aurangabad, Jalna, Beed, Latur, Parbhani, Hingoli, Nanded & Osmanabad; Konkan Division = Mumbai, Navi Mumbai, Thane, Palghar, Raigad, Ratnagiri & Sindudurg; Nagpur Division = Nagpur, Wardha, Bhandara, Chandrapur, Gadchiroli & Gondia; Nashik Division = Nashik, Dhule, Nandurbar, Jalgaon & Ahmednagar; Pune Division = Pune, Satara, Sangli, Solapur & Kolhapur.

The distribution of accredited colleges across different locations and districts are provided in table 4.6(b). It clearly underlines the concentration of the colleges in urban areas and a few select districts. Notably, top 10 districts in the State account for almost 60.5% of the total accredited colleges and Pune (17.1%), Mumbai (10.6 % including Navi Mumbai) and Nagpur (8%) claim a big chunk of it. Most of these districts have significant presence of colleges in urban areas. The accredited colleges in tribal locations are mainly concentrated in tribal dominated districts such as Nandurbar (17.5%), Gadchiroli (12.5%), Nashik (10%), Chandrapur and Yavatmal (7.5% each).



Table 4.6 (b) Distribution of Accredited Colleges across Locations &amp; Districts

Sl. No.	Districts	Urban		Semi-urban		Rural		Tribal		Total	
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
1	Pune	173	28.8	17	10.1	43	7.7	1	2.5	234	17.1
2	Mumbai	123	20.5	3	1.8	4	0.7	-	-	130	9.5
3	Nagpur	75	12.5	7	4.1	27	4.8	-	-	109	8.0
4	Nashik	40	6.7	6	3.6	17	3.0	4	10.0	67	4.9
5	Kolhapur	22	3.7	7	4.1	26	4.7	1	2.5	56	4.1
6	Jalgaon	11	1.8	6	3.6	29	5.2	2	5.0	48	3.5
7	Thane	18	3.0	13	7.7	17	3.0	-	-	48	3.5
8	Ahmednagar	7	1.2	10	5.9	29	5.2	1	2.5	47	3.4
9	Amravati	19	3.2	9	5.3	15	2.7	2	5.0	45	3.3
10	Aurangabad	18	3.0	13	7.7	11	2.0	1	2.5	43	3.1
11	Solapur	15	2.5	10	5.9	18	3.2	-	-	43	3.1
12	Sangli	8	1.3	7	4.1	23	4.1	-	-	38	2.8
13	Latur	3	0.5	7	4.1	23	4.1	-	-	33	2.4
14	Satara	3	0.5	7	4.1	23	4.1	-	-	33	2.4
15	Chandrapur	4	0.7	3	1.8	22	3.9	3	7.5	32	2.3
16	Beed	4	0.7	4	2.4	21	3.8	-	-	29	2.1
17	Nanded	7	1.2	6	3.6	14	2.5	1	2.5	28	2.0
18	Raigad	3	0.5	5	3.0	16	2.9	2	5.0	26	1.9
19	Buldana	2	0.3	6	3.6	15	2.7	-	-	23	1.7
20	Wardha	2	0.3	2	1.2	19	3.4	-	-	23	1.7
21	Yavatmal	-	-	1	0.6	19	3.4	3	7.5	23	1.7
22	Dhule	5	0.8	2	1.2	13	2.3	2	5.0	22	1.6
23	Ratnagiri	4	0.7	2	1.2	13	2.3	-	-	19	1.4
24	Navi Mumbai	15	2.5	1	0.6	1	0.2	-	-	17	1.2
25	Osmanabad	4	0.7	2	1.2	11	2.0	-	-	17	1.2
26	Parbhani	5	0.8	1	0.6	10	1.8	1	2.5	17	1.2
27	Akola	2	0.3	2	1.2	11	2.0	1	2.5	16	1.2
28	Nandurbar	-	-	1	0.6	7	1.3	7	17.5	15	1.1
29	Palghar	-	-	3	1.8	9	1.6	2	5.0	14	1.0
30	Gadchiroli	1	0.2	1	0.6	6	1.1	5	12.5	13	1.0
31	Washim	3	0.5	1	0.6	9	1.6	-	-	13	1.0
32	Jalna	2	0.3	-	-	9	1.6	-	-	11	0.8
33	Gondia	1	0.2	1	0.6	7	1.3	1	2.5	10	0.7
34	Sindhudurg	1	0.2	-	-	9	1.6	-	-	10	0.7
35	Hingoli	-	-	2	1.2	6	1.1	-	-	8	0.6
36	Bhandara	-	-	1	0.6	6	1.1	-	-	7	0.5
<b>Total</b>		<b>600</b>	<b>100</b>	<b>169</b>	<b>100</b>	<b>558</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>1367</b>	<b>100</b>

Note : Nos = Number of Colleges



### 4.3.2 Types of Colleges

Gender equity has been major issue India due to low participation of women in higher education and well-paid jobs. Despite significant presence of co-education institutions, strong socio-cultural preferences and safety concerns of men conceived to be major hindrance in low level of enrolment of women in higher education. The issue of gender equity has been partly dealt by promotion of colleges only for women at different level by socio-religious groups as well the State in India.

Table 4.7 clearly demonstrate that 93.64% of total accredited colleges are Co-education colleges in Maharashtra. Women colleges constituted only 6.36% (87) of total accredited colleges. Most of women's accredited colleges are spread across the administrative divisions with highest proportion recorded in Nagpur division (7.73%), whereas lowest (4.3%) in Aurangabad division. When we look at the distribution of accredited women's colleges across districts, Pune, Mumbai and Nagpur districts accounted for almost 47.1% of total accredited colleges for women (Fig. 4.5). Beed, Amravati, Thane, Jalgoan and Kolhapur, have 4 colleges each, accounting for 20% of the total accredited colleges for women. The 8 districts have almost 2/3 of the women's accredited colleges.

**Table 4.7 Women & Co-education accredited colleges in Maharashtra**

Administrative Divisions	Co-education		Women only		Total
	Number	%	Number	%	
Amravati	112	93.33	8	6.67	120
Aurangabad	178	95.70	8	4.30	186
Konkan	248	93.94	16	6.06	264
Nagpur	179	92.27	15	7.73	194
Nashik	186	93.47	13	6.53	199
Pune	377	93.32	27	6.68	404
<b>Maharashtra State</b>	<b>1280</b>	<b>93.64</b>	<b>87</b>	<b>6.36</b>	<b>1367</b>



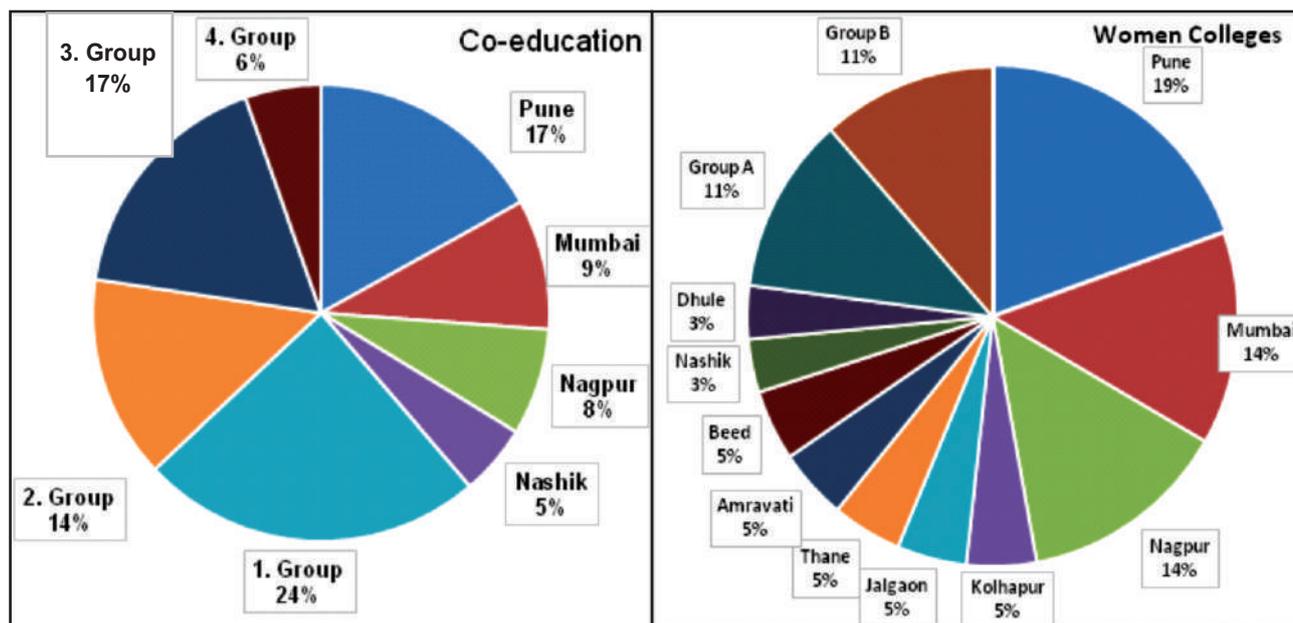


Fig. 4.5: Distribution of Accredited Colleges based on types across Districts of Maharashtra

Group 1. Kolhapur, Ahmednagar, Jalgaon, Thane, Aurangabad, Amravati, Solapur (4-3%); Group 2. Sangli, Latur, Satara, Chandrapur, Nanded, Raigad (3-2%) ; Group 3. Beed, Wardha, Buldana, Yavatmal, Dhule, Ratnagiri, Navi Mumbai, Osmanabad, Parbhani, Akola, Palghar, Nandurbar (2-1%) ; Group 4. Gadchiroli, Washim, Jalna, Gondia, Sindhudurg, Hingoli, Bhandara (less than 1%) ; Group B. Ahmednagar, Latur, Chandrapur, Nanded, Buldana, Parbhani, Akola, Gadchiroli, Jalna, Gondia (1 college each); Group A: Solapur, Sangli, Satara, Yavatmal, Nandurbar (2 Colleges each)

### 4.3.3 Source of Funding of the Colleges

Based on source of funding and management, the accredited colleges can be classified into three groups: Government, Government-aided (Private colleges) and Private Un-aided or Self-financed colleges. From table 4.8(a), it can be noticed that only small (23 out 1367) fraction of accredited colleges (1.68%) are managed and run by Government of Maharashtra. Almost 98.32% of total accredited colleges in the State are private colleges and a big chunk of them (59.55%) received regular grant-in aid from the State & Central Governments. The private unaided or self-financed accredited colleges accounted for 38.77% of total accredited colleges in the State.

As far the distribution of accredited colleges across administrative divisions is concerned, Pune and Konkan divisions relatively have higher proportions of self-financed colleges (52.23% and 43.18% respectively). Whereas, the government aided colleges have a significant presence in Aurangabad (76.34%) and Amaravati (75%) divisions, followed by Nagpur & Nashik (63.5% each) divisions. Most of these government aided private accredited colleges,



depend upon the grant-in-aid from the states (Table 4.8(b)). Almost 62.3% Govt.-aided accredited colleges fully depend upon government funding, whereas a little more than one third (37.7%) offer self-financing professional courses to improve their financial position and outreach in professional programmes. Among the Government colleges, 30% colleges have reported to have self-financing professional courses. Most of these are largely located in Nagpur, Konkan and Amravati divisions.

**Table 4.8 (a) Number of Accredited Colleges based on Source of Funding**

<b>Administrative Divisions</b>	<b>Government</b>	<b>Government-aided</b>	<b>Private/ Self-financed</b>	<b>Total</b>
Amravati	<b>2</b>	<b>90</b>	<b>28</b>	<b>120</b>
	(1.67)	(75.00)	(23.33)	(100.00)
Aurangabad	<b>6</b>	<b>142</b>	<b>38</b>	<b>186</b>
	(3.23)	(76.34)	(20.43)	(100.00)
Konkan	<b>6</b>	<b>144</b>	<b>114</b>	<b>264</b>
	(2.27)	(54.55)	(43.18)	(100.00)
Nagpur	<b>3</b>	<b>123</b>	<b>68</b>	<b>194</b>
	(1.55)	(63.40)	(35.05)	(100.00)
Nashik	<b>1</b>	<b>127</b>	<b>71</b>	<b>199</b>
	(0.50)	(63.82)	(35.68)	(100.00)
Pune	<b>5</b>	<b>188</b>	<b>211</b>	<b>404</b>
	(1.24)	(46.53)	(52.23)	(100.00)
<b>Maharashtra State</b>	<b>23</b>	<b>814</b>	<b>530</b>	<b>1367</b>
	(1.68)	(59.55)	(38.77)	(100.00)

Note: Figures in parenthesis are percentages to Total



Table 4.8 (b) Number of Accredited Colleges offering Self-financing Programmes

Administrative Divisions	Government Colleges with Self-financing Programme*	Private Colleges - Govt.-aided (with Self-financing) **	Private Colleges - Govt.-aided (without any Self-financing Courses) **
Amravati	1	28	62
	(50.00)	(31.11)	(68.89)
Aurangabad	1	40	102
	(16.67)	(28.17)	(71.83)
Konkan	3	75	69
	(50.00)	(52.08)	(47.92)
Nagpur	2	36	87
	(66.67)	(29.27)	(70.73)
Nashik	-	42	85
	-	(33.07)	(66.93)
Pune	1	86	102
	(20.00)	(45.74)	(54.26)
Maharashtra State	7	307	507
	(30.43)	(37.71)	(62.29)

Note: Figures in parenthesis are \* Percentages to total government (accredited) colleges; \*\* percentages to government-aided colleges



Table 4.8 (c) Distribution of accredited colleges across source of financing &amp; districts

Sl. No.	Districts	Government		Govt.-aided		Self-financed/ Private		Total	
		Nos	%	Nos	%	Nos	%	Nos	%
1	Pune	3	13.0	66	8.1	165	31.1	234	17.1
2	Mumbai	4	17.4	82	10.1	44	8.3	130	9.5
3	Nagpur	2	8.7	50	6.1	57	10.8	109	8.0
4	Nashik	-	-	37	4.5	30	5.7	67	4.9
5	Kolhapur	2	8.7	39	4.8	15	2.8	56	4.1
6	Jalgaon	1	4.3	30	3.7	17	3.2	48	3.5
7	Thane	-	-	22	2.7	26	4.9	48	3.5
8	Ahmednagar	-	-	31	3.8	16	3.0	47	3.4
9	Amravati	1	4.3	34	4.2	10	1.9	45	3.3
10	Aurangabad	3	13.0	21	2.6	19	3.6	43	3.1
11	Solapur	-	-	28	3.4	15	2.8	43	3.1
12	Sangli	-	-	28	3.4	10	1.9	38	2.8
13	Latur	-	-	28	3.4	5	0.9	33	2.4
14	Satara	-	-	27	3.3	6	1.1	33	2.4
15	Chandrapur	-	-	26	3.2	6	1.1	32	2.3
16	Beed	1	4.3	28	3.4	-	-	29	2.1
17	Nanded	1	4.3	22	2.7	5	0.9	28	2.0
18	Raigad	1	4.3	15	1.8	10	1.9	26	1.9
19	Buldhana	1	4.3	14	1.7	8	1.5	23	1.7
20	Wardha	-	-	19	2.3	4	0.8	23	1.7
21	Yavatmal	-	-	17	2.1	6	1.1	23	1.7
22	Dhule	-	-	18	2.2	4	0.8	22	1.6
23	Ratnagiri	1	4.3	12	1.5	6	1.1	19	1.4
24	Navi Mumbai	-	-	2	0.2	15	2.8	17	1.2
25	Osmanabad	-	-	13	1.6	4	0.8	17	1.2
26	Parbhani	1	4.3	13	1.6	3	0.6	17	1.2
27	Akola	-	-	13	1.6	3	0.6	16	1.2
28	Nandurbar	-	-	11	1.4	4	0.8	15	1.1
29	Palghar	-	-	6	0.7	8	1.5	14	1.0
30	Gadchiroli	1	4.3	12	1.5	-	-	13	1.0
31	Washim	-	-	12	1.5	1	0.2	13	1.0
32	Jalna	-	-	10	1.2	1	0.2	11	0.8
33	Gondia	-	-	10	1.2	-	-	10	0.7
34	Sindhudurg	-	-	5	0.6	5	0.9	10	0.7
35	Hingoli	-	-	7	0.9	1	0.2	8	0.6
36	Bhandara	-	-	6	0.7	1	0.2	7	0.5
<b>Total</b>		<b>23</b>	<b>100.0</b>	<b>814</b>	<b>100.0</b>	<b>530</b>	<b>100.0</b>	<b>1367</b>	<b>100.0</b>

Note : Nos = Number of Colleges





The distribution of accredited colleges by source of funding across the districts confirm significant concentration of self-financed colleges in few districts of the State (Table 4.8 (c)). This is clearly demonstrated by top one third (12 out of 36) districts accounting for 70% of the total government accredited colleges, 54% of total government-aided colleges and 78% of total self-financed colleges in the State. Moreover, among these 12 districts, the five districts mainly – Pune, Mumbai, Nagpur, Nashik and Thane constituted 60.5% of private self-financed colleges, 31.6% of total government-aided colleges and 39.1% of total government colleges in the State. In fact, the bottom 50% of the accredited colleges, have only 14% of total self-financed colleges, 17.4% of total government colleges and 24.6% of total government-aided colleges.

#### 4.3.4 Programmes Offered by the Colleges

The distributions of total number and percentage accredited colleges offering undergraduate (UG), postgraduate (PG) and both UG and PG programmes/courses are presented in table 4.9 (a). From the table, it can be observed that 63.57% of the total accredited colleges in Maharashtra offered both UG and PG programmes. The accredited colleges offering undergraduate programmes accounted for 29.55%; whereas the remaining 6.88% of total accredited colleges offered PG only programmes

**Table 4.9 (a) Graduate (UG+PG) Accredited Colleges in Maharashtra**

Administrative Divisions	Undergraduate (UG)		Postgraduate (PG)		Both (UG+PG)		Total
	Number	%	Number	%	Number	%	
Amravati	40	33.33	0	-	80	66.67	120
Aurangabad	69	37.10	6	3.23	111	59.68	186
Konkan	90	34.09	16	6.06	158	59.85	264
Nagpur	53	27.32	8	4.12	133	68.56	194
Nashik	51	25.63	15	7.54	133	66.83	199
Pune	101	25.00	49	12.13	254	62.87	404
<b>Maharashtra State</b>	<b>404</b>	<b>29.55</b>	<b>94</b>	<b>6.88</b>	<b>869</b>	<b>63.57</b>	<b>1367</b>

The accredited colleges in Nagpur, Nashik and Amravati divisions have relatively higher proportions (67 to 68%) of colleges offering both the UG and PG programmes as compared to that of Aurangabad and Konkan divisions (60%). The four districts namely, Pune, Mumbai, Nashik and Nagpur accounted for 41% of total accredited colleges offering both the UG and PG programmes in the State (Table 4.9(b)). These districts also have a higher concentration of accredited colleges offering PG only programmes (75.5%) and found to be in relatively better position in offering UG only programmes (28.2%) too. Amravati, Aurangabad and Konkan divisions have over one third of total accredited colleges offering UG programme only and accounted for almost 50% of total accredited UG only colleges in the State.





Table 4.9 (b) Distribution of accredited colleges based on programmes offered

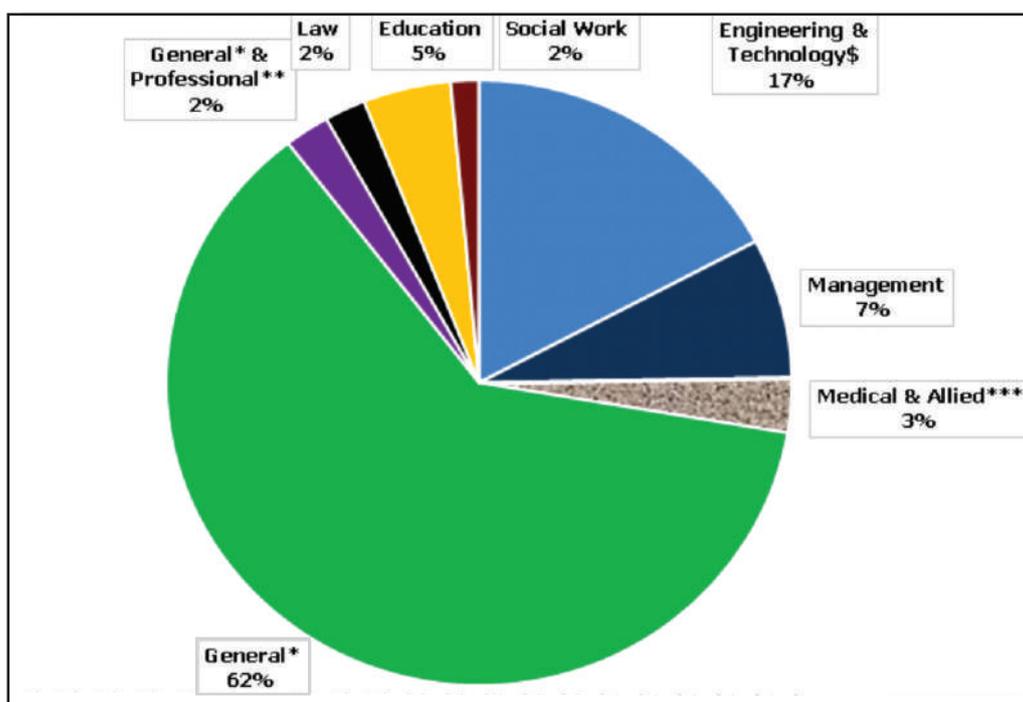
Sl. No.	Districts	PG only		UG only		UG+PG		Total
		Number	%	Number	%	Number	%	
1	Pune	46	48.94	35	8.66	153	17.61	234
2	Mumbai	10	10.64	38	9.41	82	9.44	130
3	Nagpur	7	7.45	27	6.68	75	8.63	109
4	Nashik	8	8.51	14	3.47	45	5.18	67
5	Ahmednagar	4	4.26	9	2.23	34	3.91	47
6	Amravati	-	-	12	2.97	33	3.80	45
7	Kolhapur	2	2.13	21	5.20	33	3.80	56
8	Jalgaon	3	3.19	13	3.22	32	3.68	48
9	Thane	3	3.19	14	3.47	31	3.57	48
10	Aurangabad	4	4.26	9	2.23	30	3.45	43
11	Solapur	-	-	16	3.96	27	3.11	43
12	Chandrapur	1	1.06	9	2.23	22	2.53	32
13	Sangli	1	1.06	16	3.96	21	2.42	38
14	Nanded	-	-	8	1.98	20	2.30	28
15	Satara	-	-	13	3.22	20	2.30	33
16	Beed	1	1.06	11	2.72	17	1.96	29
17	Latur	-	-	16	3.96	17	1.96	33
18	Raigad	-	-	10	2.48	16	1.84	26
19	Wardha	-	-	7	1.73	16	1.84	23
20	Buldhana	-	-	8	1.98	15	1.73	23
21	Yavatmal	-	-	8	1.98	15	1.73	23
22	Dhule	-	-	8	1.98	14	1.61	22
23	Navi Mumbai	3	3.19	2	0.50	12	1.38	17
24	Parbhani	-	-	6	1.49	11	1.27	17
25	Akola	-	-	6	1.49	10	1.15	16
26	Ratnagiri	-	-	10	2.48	9	1.04	19
27	Nandurbar	-	-	7	1.73	8	0.92	15
28	Osmanabad	-	-	9	2.23	8	0.92	17
29	Gadchiroli	-	-	6	1.49	7	0.81	13
30	Gondia	-	-	3	0.74	7	0.81	10
31	Washim	-	-	6	1.49	7	0.81	13
32	Bhandara	-	-	1	0.25	6	0.69	7
33	Jalna	1	1.06	4	0.99	6	0.69	11
34	Palghar	-	-	9	2.23	5	0.58	14
35	Sindhudurg	-	-	7	1.73	3	0.35	10
36	Hingoli	-	-	6	1.49	2	0.23	8
<b>Total</b>		<b>94</b>	<b>100</b>	<b>404</b>	<b>100</b>	<b>869</b>	<b>100</b>	<b>1367</b>





### 4.3.5 Type of Programmes Offered by the Colleges

Fig. 4.6 and tables 4.10 (a, b & c) given below provide information on accredited colleges offering different educational programmes/courses. The colleges offering educational programmes are classified in broader categories such as General, General & Professional, Education, Law, Engineering & Technology, Management, Social Work, Medical & allied Courses etc. The colleges offering various programmes under arts, commerce & science disciplines have been categorised under 'General', whereas; the colleges offering 'General Programmes' along with some allied professional courses like journalism, home science, law, physical & teachers' education, management & pharmacy related courses have been clubbed into 'General & Professional' category. 'Engineering & Technology' related programmes included engineering, technology, and allied courses on information technology and technical programmes such as architecture, designs and information management etc. Both physical education and teachers' training colleges have clubbed into 'Education' category.



**Fig. 4.6: Distribution of Accredited Colleges according to Educational Programmes**

From Fig. 4.6, it can be observed that accredited colleges offering general educational programmes constituted a significant proportion of total accredited colleges in the State. The share of all general and professional educational programmes offered by the colleges together stood around 64% of the total accredited colleges. The colleges offering engineering & technology programmes accounted for 17% of the total accredited colleges, followed by management (7%), education (5%) and medical & allied (3%) programmes.





The distributions of accredited colleges offering different educational programmes across administrative divisions and districts are presented in tables 4.10 (a,b&c). The accredited colleges offering general educational programmes (846), show relatively higher concentration in Pune (22.7%) and Konkan (20.3%) divisions followed by Aurangabad (16.8%), Nashik (15%) and Nagpur (14.5%) divisions. Mumbai, Pune, Kolhapur and Thane districts with share of 9.9%, 9%, 4.6% and 4.4% respectively constitute almost 27.9 % of total accredited colleges offering general programmes. Nagpur, Nashik and Amravati districts also have relative better number of colleges offering general courses.

**Table 4.10 (a) Number of Accredited Colleges offering different Programmes/Courses**

Programmes/ Courses		Amravati	Aurangabad	Konkan	Nagpur	Nashik	Pune	Total
Number of Colleges	General*	90	142	172	123	127	192	846
	General* & Professional**	3	4	8	4	2	11	32
	Engineering & Technology\$	20	17	38	33	29	99	236
	Management	-	3	16	12	18	53	102
	Education	3	8	24	6	6	15	62
	Medical & Allied***	1	3	5	6	6	19	40
	Law	1	6	-	1	8	13	29
	Social Work	2	3	1	9	3	2	20
	<b>Total</b>	<b>120</b>	<b>186</b>	<b>264</b>	<b>194</b>	<b>199</b>	<b>404</b>	<b>1367</b>
Percentages to Total	General*	10.6	16.8	20.3	14.5	15.0	22.7	100.0
	General* & Professional**	9.4	12.5	25.0	12.5	6.3	34.4	100.0
	Engineering & Technology\$	8.5	7.2	16.1	14.0	12.3	41.9	100.0
	Management	-	2.9	15.7	11.8	17.6	52.0	100.0
	Education	4.8	12.9	38.7	9.7	9.7	24.2	100.0
	Medical & Allied***	2.5	7.5	12.5	15.0	15.0	47.5	100.0
	Law	3.4	20.7	-	3.4	27.6	44.8	100.0
	Social Work	10.0	15.0	5.0	45.0	15.0	10.0	100.0
	<b>Total</b>	<b>8.8</b>	<b>13.6</b>	<b>19.3</b>	<b>14.2</b>	<b>14.6</b>	<b>29.6</b>	<b>100.0</b>

Note - \*Arts, Commerce & Science; \*\*Management, Law, Education (Physical & Teacher), Media, Home Science, pharmacy etc; \*\*\*Pharmacy, Ayurveda, Homeopathy & Naturopathy; \$incl. Technology & Management





There are some a good number of accredited colleges in the State offering law and social work programmes. Most of these colleges are located in Pune (24.1%) district followed by Ahmednagar (10.3%), Nashik, Kolhapur, Satara and Nanded (6.9% each). These six districts constituted 62% of total accredited colleges offering law programme in the State (Table 4.10 (a)). Whereas, the accredited colleges offering social work programmes are largely concentrated in regions with a significant tribal population. These included districts such as Nagpur (25%), Jalgoan (10%), Chandrapur (10%), Bhandara, Gadchiroli, Dhule and Amaravati (5% each) constituting 65% of total accredited colleges offering social work programmes.

The accredited colleges offering engineering and technology programmes have a significant presence in Pune division (Table 4.10 (a)). Almost 41.9% of these colleges are concentrated in this division, Pune district alone accounted for 29.7% of total accredited colleges in the State (Table 4.10 (c)). Apart from these, Nagpur (11.9%), Nashik (5.9%), Mumbai (5.5%), Aurangabad (4.7%) and Solapur (4.2%) districts also found to have respectable number of colleges (77 out of 236) offering these courses.

Most of the accredited colleges offering management programmes are found in Pune division (52%) in the State. Pune district alone constituted 48% of total accredited colleges offering management programme, followed by Nagpur (9.8%), Nashik (8.8%) and Mumbai (9.8%). These four districts constituted 76.4% (78 out of 102) of total accredited management colleges in the State (Table 4.10 (c)).

The accredited colleges offering educational training programmes are largely concentrated in Konkan (38.7%) and Pune (24.2%) divisions. Mumbai (22.6%) and Pune (12.9%) districts constituted 35.5% of total accredited colleges offering these programmes. Thane (6.5%), Raigad (4.8%), Kolhapur (4.8%), Solapur (4.8%), Nagpur (4.8%) and Aurangabad (4.8%) accounted for nearly 30.5% of total accredited colleges offering education programmes in the State.

Most of the accredited colleges offering medical and allied programmes such as Pharmacy, Ayurveda, Homeopathy & Naturopathy etc., are found in Pune division in the State. Pune district alone constituted 47.5% of total accredited colleges offering medical and allied programmes, followed by Nagpur (12.5%), Nashik (7.5%) and Ahmednagar (7.5%). These four districts accounted for 75% of total accredited colleges offering such programmes.





**Table 4.10 (b) District-wise number of Accredited Colleges offering different Programmes/Courses**

Sl. No.	Districts	General		General & Professional		Education		Social Work	
		Number	%	Number	%	Number	%	Number	%
1	Mumbai	84	9.9	7	21.9	14	22.6	1	5.0
2	Pune	76	9.0	4	12.5	8	12.9	1	5.0
3	Nagpur	57	6.7	1	3.1	3	4.8	5	25.0
4	Kolhapur	39	4.6	2	6.3	3	4.8	-	-
5	Nashik	37	4.4	-	-	2	3.2	-	-
6	Thane	37	4.4	-	-	4	6.5	-	-
7	Amravati	33	3.9	-	-	2	3.2	1	5.0
8	Jalgaon	32	3.8	-	-	2	3.2	2	10.0
9	Ahmednagar	31	3.7	1	3.1	-	-	-	-
10	Latur	29	3.4	-	-	1	1.6	-	-
11	Sangli	28	3.3	1	3.1	1	1.6	-	-
12	Solapur	27	3.2	2	6.3	3	4.8	-	-
13	Beed	25	3.0	1	3.1	1	1.6	1	5.0
14	Aurangabad	23	2.7	1	3.1	3	4.8	-	-
15	Chandrapur	23	2.7	-	-	1	1.6	2	10.0
16	Satara	22	2.6	2	6.3	-	-	1	5.0
17	Nanded	22	2.6	-	-	1	1.6	1	5.0
18	Raigad	19	2.2	-	-	3	4.8	-	-
19	Yavatmal	18	2.1	1	3.1	-	-	-	-
20	Buldana	16	1.9	1	3.1	1	1.6	-	-
21	Wardha	16	1.9	3	9.4	1	1.6	-	-
22	Dhule	15	1.8	1	3.1	1	1.6	1	5.0
23	Ratnagiri	13	1.5	-	-	1	1.6	-	-
24	Akola	13	1.5	1	3.1	-	-	-	-
25	Osmanabad	13	1.5	-	-	1	1.6	-	-
26	Parbhani	13	1.5	1	3.1	1	1.6	-	-
27	Nandurbar	12	1.4	-	-	1	1.6	-	-
28	Gadchiroli	12	1.4	-	-	-	-	1	5.0
29	Washim	10	1.2	-	-	-	-	1	5.0
30	Gondia	10	1.2	-	-	-	-	-	-
31	Jalna	9	1.1	1	3.1	-	-	1	5.0
32	Hingoli	8	0.9	-	-	-	-	-	-
33	Palghar	7	0.8	1	3.1	1	1.6	-	-
34	Sindhudurg	7	0.8	-	-	1	1.6	-	-
35	Navi Mumbai	5	0.6	-	-	-	-	-	-
36	Bhandara	5	0.6	-	-	1	1.6	1	5.0
<b>Total</b>		<b>846</b>	<b>100.0</b>	<b>32</b>	<b>100.0</b>	<b>62</b>	<b>100.0</b>	<b>20</b>	<b>100.0</b>



Table 4.10 (c) Number of Accredited Colleges offering different Programmes/Courses in Maharashtra

Sl. No.	Districts	Engineering & Technology		Management		Medical		Law	
		Number	%	Number	%	Number	%	Number	%
1	Pune	70	29.7	49	48.0	19	47.5	7	24.1
2	Nagpur	28	11.9	10	9.8	5	12.5	-	-
3	Nashik	14	5.9	9	8.8	3	7.5	2	6.9
4	Mumbai	13	5.5	10	9.8	1	2.5	-	-
5	Aurangabad	11	4.7	3	2.9	1	2.5	1	3.4
6	Solapur	10	4.2	-	-	-	-	1	3.4
7	Amravati	9	3.8	-	-	-	-	-	-
8	Kolhapur	9	3.8	1	1.0	-	-	2	6.9
9	Navi Mumbai	8	3.4	3	2.9	1	2.5	-	-
10	Jalgaon	7	3.0	4	3.9	-	-	1	3.4
11	Ahmednagar	5	2.1	4	3.9	3	7.5	3	10.3
12	Buldhana	5	2.1	-	-	-	-	-	-
13	Sangli	5	2.1	2	2.0	-	-	1	3.4
14	Satara	5	2.1	1	1.0	-	-	2	6.9
15	Palghar	4	1.7	-	-	1	2.5	-	-
16	Ratnagiri	4	1.7	-	-	1	2.5	-	-
17	Thane	4	1.7	3	2.9	-	-	-	-
18	Chandrapur	3	1.3	2	2.0	-	-	1	3.4
19	Raigad	3	1.3	-	-	1	2.5	-	-
20	Yavatmal	3	1.3	-	-	1	2.5	-	-
21	Akola	2	0.8	-	-	-	-	-	-
22	Dhule	2	0.8	1	1.0	-	-	1	3.4
23	Latur	2	0.8	-	-	-	-	1	3.4
24	Nanded	2	0.8	-	-	-	-	2	6.9
25	Osmanabad	2	0.8	-	-	1	2.5	-	-
26	Sindhudurg	2	0.8	-	-	-	-	-	-
27	Wardha	2	0.8	-	-	1	2.5	-	-
28	Nandurbar	1	0.4	-	-	-	-	1	3.4
29	Washim	1	0.4	-	-	-	-	1	3.4
30	Beed	-	-	-	-	-	-	1	3.4
31	Bhandara	-	-	-	-	-	-	-	-
32	Gadchiroli	-	-	-	-	-	-	-	-
33	Gondia	-	-	-	-	-	-	-	-
34	Hingoli	-	-	-	-	-	-	-	-
35	Jalna	-	-	-	-	-	-	-	-
36	Parbhani	-	-	-	-	1	2.5	1	3.4
<b>Total</b>		<b>236</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>29</b>	<b>100</b>



### 4.3.6 Performance of Affiliated Colleges by Status and Accreditation Phases

The total number of 1367 accredited colleges taken for the analysis in this report are affiliated to various universities in the State. The details of these colleges and status of affiliation and other status such as constituents, autonomous and minority are presented in Table 4.11. No doubt, given the concentration of accredited colleges in Pune and Mumbai regions, the table clearly demonstrates that almost 42.7% (584 out of 1367) colleges are affiliated to Savitribai Phule Pune University and University of Mumbai. Moreover, these universities also form significant proportions of accredited colleges with constituents (38.5%), autonomous (60.5%) and minority (61.7%) status. University of Mumbai, however, tops among all the universities affiliated colleges with autonomous and minority status.

**Table 4.11 Distribution of Accredited Colleges based on College Status and Affiliated Universities**

Rank	Name of the University	Total Colleges		Constituent		Autonomous		Minority	
		No	%	No	%	No	%	No	%
1	Savitribai Phule Pune University Pune	332	24.3	10	25.6	15	19.7	12	10.4
2	University of Mumbai, Mumbai	252	18.4	7	17.9	31	40.8	59	51.3
3	R.T.M. Nagpur University, Nagpur	154	11.3	5	12.8	7	9.2	15	13.0
4	Shivaji University, Kolhapur	127	9.3	4	10.3	11	14.5	4	3.5
5	S.G.B. Amravati University, Amravati	119	8.7	1	2.6	1	1.3	2	1.7
6	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	104	7.6	3	7.7	-	-	8	7.0
7	S.R.T.M. University, Nanded	82	6.0	1	2.6	1	1.3	1	0.9
8	K.B.C. North Maharashtra University Jalgaon	78	5.7	2	5.1	4	5.3	4	3.5
9	Gondwana University, Gadchiroli	38	2.8	1	2.6	-	-	-	-
10	P.A.H. Solapur University, Solapur	34	2.5	1	2.6	2	2.6	5	4.3
11	S.N.D.T. Women's University Mumbai	23	1.7	3	7.7	2	2.6	4	3.5
12	Maharashtra University of Health sciences, Nashik	12	0.9	1	2.6	-	-	-	-
13	Dr. Babasaheb Ambedkar Technological University, Lonere	10	0.7	-	-	1	1.3	1	0.9
14	Institution of Engineers Jawaharlal Nehru University (JNU), Delhi	1	0.1	-	-	1	1.3	-	-
15	Bharati Vidyapeeth (to be Deemed University), Pune	1	0.1	-	-	-	-	-	-
<b>Total</b>		<b>1367</b>	<b>100.0</b>	<b>39</b>	<b>100.0</b>	<b>76</b>	<b>100.0</b>	<b>115</b>	<b>100.0</b>





In terms of providing affiliation to the accredited colleges, R.T.M Nagpur University stands at third place. The university has 154 accredited colleges affiliated to it, which formed 11.3% of total accredited colleges in the State. Among the accredited colleges, the university has also a sizable number of minority (15), autonomous (7) and constituent (5) colleges, accounting for around 11% to 13% shares in their respective categories. Shivaji University, Kolhapur, SGB Amravati University, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, SRTM University, Nanded & KBC North Maharashtra University Jalgaon provided affiliation to around 510 (37.3%) accredited colleges in the State. Their shares in total accredited colleges range from 5.7%. to 9.3% These five universities also cater to the need and affiliation related services to 28.3% of total constituent accredited colleges, 22.4% of total autonomous accredited colleges and 16.6% of total minority status accredited colleges in the State.

Details related to relative performance of accredited colleges over different cycles/phases of accreditations across affiliating universities in Maharashtra are provided in tables 4.12 (a) & 4.12 (b). Since the performance of accredited colleges are assessed over three different phases of accreditation periods (1999 to 2020), we have presented two sets of results by using independent and paired samples to control the effect of change in the samples on the performance of the accredited colleges.

The following important observations could be derived from the tables – i) there has been continuous increase in the number of colleges participating in accreditation process in the State. The number of accredited colleges have increased from 253 (in first phase/cycles) to 1367 colleges (in latest phase), ii) the overall performance of colleges witnessed a significant deep in the second phase/cycle of accreditation from 3.03 to 1.91 points (Table 4.12(a)). This signifies higher level of participation of colleges not performing better on the seven criteria indicators of NAAC, but sustained participation of colleges led to a significant improvement in their performance. The recovery in average CGPA from 1.91 to 2.63 points over last two phases accreditation clearly demonstrated this, iii) The variability (CV) in second phase of accreditation is higher than the latest and the first phase of accreditation, iv) after controlling the effect of entry of new colleges in accreditation process using dependent/paired sampling, it is observed that relative performance of accredited colleges which entered the first phase also lagged in the second phase, but the level of decline in average score (3.03 to 2.79 points) witnessed was comparatively less significant (Table 4.12(b)).





**Table 4.12 (a) Relative Performance of Accredited Colleges across different Cycles and Affiliating Universities in Maharashtra (using independent sample)**

Sl. No	Universities	No. of Colleges			Mean CGPA			CV of CGPA		
		Latest Cycle	Cycle_L1	Cycle_L2	Latest Cycles	Cycle_L1	Cycle_L2	Latest Cycles	Cycle_L1	Cycle_L2
1	Bharati Vidyapeeth (to be Deemed University), Pune	1	-	-	3.06	-	-	-	-	-
2	Dr. Babasaheb Ambedkar Technological University, Lonere	10	-	-	2.68	-	-	11.6	-	-
3	Institution of Engineers Jawaharlal Nehru University (JNU), Delhi	1	1	-	3.16	3.15	-	-	-	-
4	Maharashtra University of Health sciences, Nashik	12	3	-	2.97	2.99	-	13.2	20.8	-
5	University of Mumbai, Mumbai	252	125	67	2.75	2.33	3.12	17.6	43.0	11.7
6	Savitribai Phule Pune University, Pune	332	106	44	2.71	2.17	3.04	16.0	50.6	13.3
7	Shivaji University, Kolhapur	127	74	51	2.67	2.13	2.95	16.6	41.9	7.4
8	S.N.D.T. Women's University, Mumbai	23	9	4	2.66	1.99	3.08	18.3	63.7	8.3
9	R.T.M. Nagpur University, Nagpur	154	68	28	2.57	1.98	3.07	18.3	50.2	8.8
10	P.A.H. Solapur University, Solapur	34	16	9	2.56	1.83	3.00	19.1	59.0	8.2
11	K.B.C. North Maharashtra University, Jalgaon	78	40	5	2.55	1.48	3.20	17.2	69.7	6.6
12	S.G.B. Amravati University, Amravati	119	61	16	2.48	1.48	2.92	16.7	68.1	9.2
13	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	104	58	15	2.55	1.45	2.88	16.0	70.7	6.7
14	Gondwana University, Gadchiroli	38	17	6	2.27	1.42	2.83	17.8	64.6	8.5
15	S.R.T.M. University, Nanded	82	46	8	2.45	1.22	3.03	16.6	76.6	11.9
<b>Total</b>		<b>1367</b>	<b>624</b>	<b>253</b>	<b>2.63</b>	<b>1.91</b>	<b>3.03</b>	<b>17.5</b>	<b>56.4</b>	<b>10.6</b>

Note: Latest Cycles = Current phase of accreditation cycles (Fig. 4.7); Cycle\_L1 = Second or previous phase (time lag 1) of accreditation cycles; Cycle\_L2 = First phase of (time lag 2) accreditation cycles. For example, if a college is currently in 3<sup>rd</sup> cycle of accreditation, Cycle\_L1 represents second cycle of accreditation and Cycle\_L2 stands for first cycle of accreditation.



**Table 4.12 (b) Relative Performance of Accredited Colleges across different Cycles and Affiliating Universities in Maharashtra (using dependent/paired samples)**

Sl. No.	Universities	Mean CGPA (Two Cycles* Comparison) N = 624		Mean CGPA (Three Cycle** Comparison) N = 253		
		Cycle L1	Latest Cycles	Cycle L2	Cycle L1	Latest Cycle
1.	University of Mumbai, Mumbai	2.33	2.98	3.13	2.84	3.09
2.	K.B.C. North Maharashtra University, Jalgaon	1.48	2.64	3.20	2.99	3.05
3.	Savitribai Phule Pune University, Pune	2.17	2.89	3.04	2.94	3.01
4.	S.R.T.M. University, Nanded	1.26	2.61	3.03	3.00	2.97
5.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	1.49	2.69	2.90	2.82	2.96
6.	R.T.M. Nagpur University, Nagpur	1.98	2.70	3.07	2.75	2.90
7.	S.N.D.T. Women's University, Mumbai	1.99	2.73	3.08	2.89	2.80
8.	S.G.B. Amravati University, Amravati	1.50	2.56	2.92	2.69	2.77
9.	Shivaji University, Kolhapur	2.16	2.72	2.95	2.63	2.75
10.	P.A.H. Solapur University, Solapur	1.84	2.63	3.00	2.71	2.67
11.	Gondwana University, Gadchiroli	1.42	2.50	2.83	2.42	2.59
12.	Institution of Engineers Jawaharlal Nehru University (JNU)	3.15	3.16	-	-	-
13.	Maharashtra University of Health sciences, Nashik	2.99	3.28	-	-	-
<b>Total</b>		<b>1.91</b>	<b>2.76</b>	<b>3.03</b>	<b>2.79</b>	<b>2.92</b>

Note: Latest Cycles = Current phase of accreditation cycles (Fig. 4.7); Cycle\_L1 = Second or previous phase (time lag 1) of accreditation cycles; Cycle\_L2 = First phase of (time lag 2) accreditation cycles. For example, if a college is currently in 3<sup>rd</sup> cycle of accreditation, Cycle\_L1 represents second cycle of accreditation and Cycle\_L2 stands for first cycle of accreditation. However, \*included all those colleges found in the second phase of accreditation, \*\* included those colleges which are in all three phases of accreditations.

### 4.3.7 Accreditation Cycles of the Accredited Colleges

In the current phase of accreditation cycles, 46% of total accredited colleges reported their first cycle of accreditation, whereas 26.5% and 27.20% reported their second and third phase of accreditation. Only small fraction of colleges (0.22%) are in fourth cycle of accreditation (Fig 4.7).

In terms of grade distribution, the accredited colleges show a decent performance. A significant proportion of the accredited colleges received 'B' grade (36.87%). The colleges with very poor (C) grade constituted 8.12% in the State. The accredited colleges with relatively better (above average) performing colleges ('B+' and 'B++' grades) accounted for 27.87% of the total colleges. The State has also best performing accredited colleges. Almost 23.5% of the colleges received 'A' grade, whereas, 3.66% colleges claimed 'A+' and 'A++' grades.

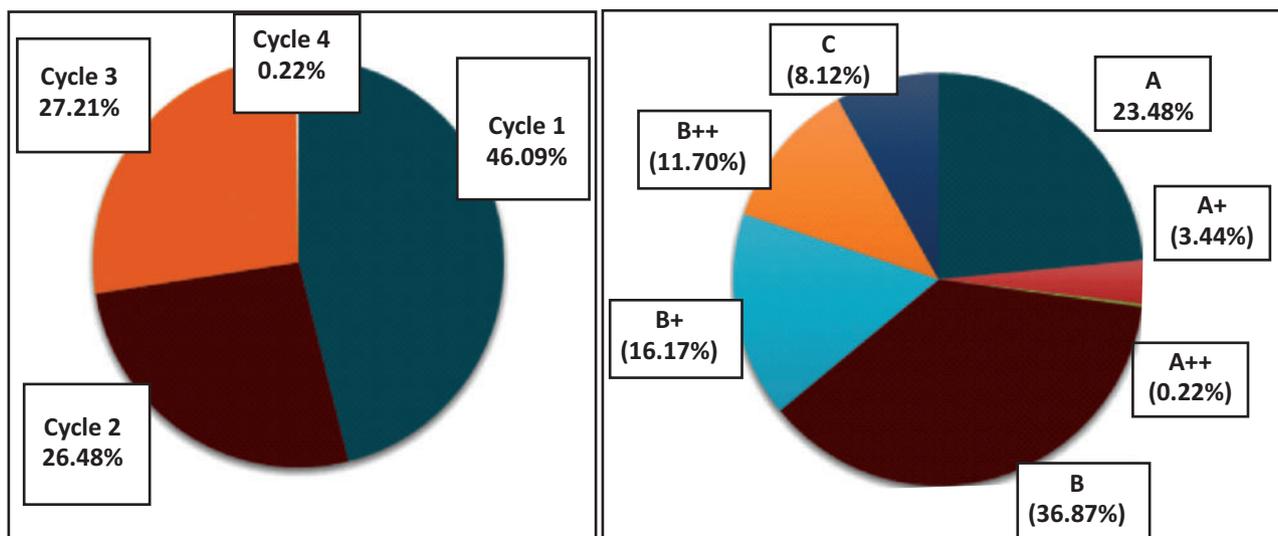


Fig. 4.7: Distribution of Colleges based on Accreditation Cycles and Grades

### 4.3.8 Overall Analysis of the Colleges

It is observed that the accredited colleges with a higher duration of participation in the accreditation process perform better to their counterparts (Table 4.13). The accredited colleges who entered in the early phases of accreditations have given more attention on performance management and thereby have continued to perform better. This is well demonstrated by higher percentage of accredited colleges in the 4th cycle of accreditation receiving grade 'A' (66.7%) and 'A+' (33.3%). The corresponding figures for accredited colleges in the third cycles of accreditations observed to be 40.3% and 8.1% respectively. The figures for corresponding groups in second and first cycles of accreditations progressively show declining trend.

Table 4.13 Distribution of Grades based on Accreditation Cycle of Colleges in Maharashtra

Grade	Number of Colleges					Percentages to Total				
	Cycle 1	Cycle 2	Cycle 3	Cycle 4	All	Cycle 1	Cycle 2	Cycle 3	Cycle 4	All
A++	-	1	2	-	3	-	0.3	0.5	-	0.2
A+	11	5	30	1	47	1.7	1.4	8.1	33.3	3.4
A	103	66	150	2	321	16.3	18.2	40.3	66.7	23.5
B++	73	35	52	-	160	11.6	9.7	14.0	-	11.7
B+	109	44	68	-	221	17.3	12.2	18.3	-	16.2
B	257	185	62	-	504	40.8	51.1	16.7	-	36.9
C	77	26	8	-	111	12.2	7.2	2.2	-	8.1
<b>Total</b>	<b>630</b>	<b>362</b>	<b>372</b>	<b>3</b>	<b>1367</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>





When we look at overall performance of accredited colleges across evaluation indicators, the accredited colleges on an average show better performance on infrastructure and learning resources, teaching – learning and evaluation and curricular aspects (Table 4.14). Whereas, in terms of student support and progression, governance, leadership and management and institutional values and best practices their performance is below the State average. The performance in research, innovations and extension found to be at average level.

**Table 4.14 Descriptive Statistics for Accredited Colleges in Maharashtra**

Sl. No.	Criteria	Mean	CV (%)	Minimum	Maximum
C1	Curricular Aspects	2.67	22.66	0.80	4.00
C2	Teaching - Learning and Evaluation	2.76	15.85	1.00	4.00
C3	Research, Innovations and Extension	2.63	27.09	0.20	3.92
C4	Infrastructure and Learning Resources	2.77	21.33	1.00	4.00
C5	Student Support and Progression	2.34	26.74	0.29	4.00
C6	Governance, Leadership and Management	2.46	23.71	0.88	4.00
C7	Institutional Values and Best Practices	2.50	25.78	0.60	4.00
<b>CGPA</b>		<b>2.63</b>	<b>17.46</b>	<b>1.52</b>	<b>3.79</b>

The details on the performance scores and relative rankings of accredited colleges for all the seven quality evaluation indicators are given in Tables 4.15 & 4.16 and Fig. 4.8. The accredited colleges affiliated to Institution of Engineers, Jawaharlal Nehru University and Bharati Vidyapeeth (to be Deemed) University and Maharashtra University of Health sciences, Nashik have received highest scores in accreditation with average CGPAs ranging from 2.97 to 3.16 points. In terms of group ranking, the accredited colleges stand at first, second and third positions respectively. Among the State public universities, the accredited colleges affiliated to University of Mumbai, Savitribai Phule Pune University Dr. Babasaheb Ambedkar Technology University, Lonere, Shivaji University, Kolhapur, S.N.D.T University, Mumbai, show relatively better performance in terms both seven criteria evaluation scores and rankings. The accredited colleges affiliated to these universities have evaluation criteriascores higher thanthose of State averages and stood at 4<sup>th</sup> to 8<sup>th</sup> positions respectively.

The evaluation criteria scores, and rankings of accredited colleges affiliated to universities from Jalgaon, Solapur, Vidarbha (Amravati, Nagpur and Gadchiroli) and Marathwada (Aurangabad and Nanded) found to be less than that of the State averages and needs special policy attention.





The relative performance in terms of ranking presented in table 4.16 and Fig. 4.8, highlights the variation across the seven evaluation scores and underline the areas of strengths and weakness of the accredited colleges across affiliated universities. The green shaded boxes indicate the relative strengths of the accredited colleges at given rank, whereas the orange colour shed boxes highlight areas of weaknesses; where these colleges can take initiatives to improve both the scores and rankings. Similarly, the dots above trend line in Fig. 4.8 indicate key areas of weakness to address the issues related quality concerns in higher education. It is, however, important note that the accredited colleges in lower ranking affiliated university need substantial improvement not only in breaching the overall gaps in scores but also the distance in rankings.

**Table 4.15 Criterion-wise/Affiliated University-wise Performance of Accredited Colleges**

R	Universities		C1	C2	C3	C4	C5	C6	C7	CGPA
1	Institution of Engineers Jawaharlal Nehru University (JNU)	Mean	3.20	3.29	3.08	3.30	2.00	3.30	4.00	3.16
2	Bharati Vidyapeeth Deemed University, Pune	Mean	3.30	2.89	3.13	3.50	3.00	3.00	3.00	3.06
3	Maharashtra University of Health Sciences, Nashik	Mean	2.83	3.11	3.22	3.06	2.56	2.98	2.81	2.97
		<b>CV%</b>	<b>18.27</b>	<b>10.78</b>	<b>13.83</b>	<b>17.77</b>	<b>28.44</b>	<b>16.03</b>	<b>21.82</b>	<b>13.17</b>
		Min	1.90	2.60	2.08	2.00	1.54	2.00	1.70	2.27
		Max	3.50	3.86	3.75	3.80	4.00	3.60	3.70	3.66
4	University of Mumbai	Mean	2.79	2.89	2.71	2.97	2.43	2.60	2.60	2.75
		<b>CV%</b>	<b>20.09</b>	<b>16.39</b>	<b>26.27</b>	<b>18.03</b>	<b>29.28</b>	<b>23.51</b>	<b>24.16</b>	<b>17.62</b>
		Min	1.20	1.79	0.65	1.50	0.29	0.90	0.70	1.57
		Max	4.00	4.00	3.92	4.00	4.00	4.00	4.00	3.72
5	Savitribai Phule Pune University, Pune	Mean	2.85	2.81	2.63	2.94	2.44	2.50	2.59	2.71
		<b>CV%</b>	<b>20.62</b>	<b>14.43</b>	<b>27.29</b>	<b>17.84</b>	<b>25.19</b>	<b>23.22</b>	<b>24.88</b>	<b>15.99</b>
		Min	1.06	1.34	0.68	1.00	0.85	0.88	0.90	1.61
		Max	4.00	3.89	3.92	4.00	4.00	4.00	4.00	3.79
6	Dr. Babasaheb Ambedkar Technological University Lonere	Mean	3.00	2.74	2.42	3.13	2.55	2.42	2.40	2.68
		<b>CV%</b>	<b>14.65</b>	<b>10.16</b>	<b>32.37</b>	<b>14.47</b>	<b>19.69</b>	<b>12.05</b>	<b>20.94</b>	<b>11.60</b>
		Min	2.05	2.45	0.65	2.22	1.73	2.00	1.69	2.13
		Max	3.44	3.37	3.50	3.80	3.53	3.00	3.30	3.18
7	Shivaji University Kolhapur	Mean	2.73	2.78	2.67	2.74	2.39	2.58	2.60	2.67
		<b>CV%</b>	<b>21.50</b>	<b>14.35</b>	<b>28.16</b>	<b>21.64</b>	<b>23.38</b>	<b>20.43</b>	<b>23.92</b>	<b>16.60</b>
		Min	1.44	1.89	0.83	1.19	1.16	1.50	1.00	1.61
		Max	4.00	3.80	3.92	4.00	4.00	3.70	4.00	3.63



8	S.N.D.T. Women's University, Mumbai	Mean	2.74	2.78	2.69	2.69	2.44	2.55	2.50	2.66
		CV%	<b>22.88</b>	<b>16.79</b>	<b>24.83</b>	<b>24.31</b>	<b>27.40</b>	<b>28.38</b>	<b>28.24</b>	<b>18.31</b>
		Min	1.37	1.96	1.50	1.00	1.37	1.30	1.10	1.72
		Max	3.70	3.74	3.83	3.80	3.70	3.90	3.40	3.69
9	R.T.M. Nagpur University Nagpur	Mean	2.57	2.72	2.58	2.70	2.30	2.37	2.44	2.57
		CV%	<b>24.15</b>	<b>17.04</b>	<b>26.62</b>	<b>21.31</b>	<b>27.30</b>	<b>25.50</b>	<b>27.58</b>	<b>18.34</b>
		Min	0.88	1.51	0.71	1.37	0.87	1.10	1.00	1.61
		Max	3.89	3.77	3.92	3.83	3.80	3.90	4.00	3.53
10	P.A.H. Solapur University Solapur	Mean	2.56	2.60	2.57	2.57	2.27	2.36	2.40	2.56
		CV%	<b>27.69</b>	<b>19.81</b>	<b>35.11</b>	<b>24.42</b>	<b>32.67</b>	<b>24.95</b>	<b>28.25</b>	<b>19.14</b>
		Min	1.00	1.00	1.00	1.00	0.36	1.00	1.00	1.60
		Max	3.80	3.51	3.85	3.70	3.80	3.30	3.70	3.51
11	Dr. Babasaheb Ambedkar Marathwada University Aurangabad	Mean	2.50	2.71	2.66	2.65	2.20	2.41	2.45	2.55
		CV%	<b>21.22</b>	<b>14.94</b>	<b>25.66</b>	<b>21.66</b>	<b>23.16</b>	<b>23.08</b>	<b>23.70</b>	<b>16.01</b>
		Min	1.00	1.46	0.73	1.20	1.14	1.20	1.00	1.52
		Max	3.80	3.86	3.87	4.00	3.64	3.70	4.00	3.75
12	North Maharashtra University, Jalgaon	Mean	2.61	2.69	2.53	2.58	2.27	2.42	2.44	2.55
		CV%	<b>21.42</b>	<b>14.56</b>	<b>27.93</b>	<b>22.85</b>	<b>27.11</b>	<b>24.11</b>	<b>25.47</b>	<b>17.24</b>
		Min	1.00	1.85	0.77	1.30	0.89	1.00	1.10	1.52
		Max	3.80	3.74	3.92	4.00	3.70	3.81	4.00	3.55
13	S.G.B. Amravati University Amravati	Mean	2.43	2.60	2.58	2.56	2.29	2.31	2.36	2.48
		CV%	<b>23.67</b>	<b>15.75</b>	<b>25.88</b>	<b>22.65</b>	<b>24.26</b>	<b>22.70</b>	<b>24.75</b>	<b>16.71</b>
		Min	0.94	1.51	0.84	1.20	0.96	1.20	0.60	1.55
		Max	3.80	3.73	3.92	3.65	3.70	3.63	3.40	3.54
14	S.R.T.M. University Nanded	Mean	2.41	2.65	2.55	2.47	2.06	2.32	2.27	2.45
		CV%	<b>22.62</b>	<b>14.20</b>	<b>26.43</b>	<b>22.50</b>	<b>27.42</b>	<b>21.74</b>	<b>29.81</b>	<b>16.63</b>
		Min	1.38	1.78	0.20	1.00	0.95	1.18	0.70	1.66
		Max	3.60	3.54	3.75	3.70	4.00	3.70	4.00	3.52
15	Gondwana University Gadchiroli	Mean	2.13	2.51	2.30	2.24	2.04	2.10	2.02	2.27
		CV%	<b>25.80</b>	<b>16.69</b>	<b>28.67</b>	<b>24.49</b>	<b>22.56</b>	<b>24.67</b>	<b>25.98</b>	<b>17.78</b>
		Min	0.80	1.63	1.17	1.15	1.25	0.90	0.70	1.56
		Max	3.11	3.44	3.67	3.10	3.00	3.10	3.00	3.05



**Table 4.16 Relative Performance (Ranking\*) of the Accredited Colleges by Criterion by Quality Assessment under different Affiliated Universities in Maharashtra**

Rank	Universities	C1	C2	C3	C4	C5	C6	C7	CGPA
1	Institution of Engineers Jawaharlal Nehru University (JNU)	2	1	3	2	15	1	1	1
2	Bharati Vidyapeeth Deemed University	1	4	2	1	1	2	2	2
3	Maharashtra University of Health sciences, Nashik	5	2	1	4	2	3	3	3
4	University of Mumbai, Mumbai	6	3	4	5	6	4	4	4
5	Savitribai Phule Pune University Pune	4	5	8	6	5	7	6	5
6	Dr. Babasaheb Ambedkar Technological University, Lonere	3	8	14	3	3	9	12	6
7	Shivaji University, Kolhapur	8	6	6	7	7	5	5	7
8	S.N.D.T. Women's University Mumbai	7	7	5	9	4	6	7	8
9	R.T.M. Nagpur University Nagpur	10	9	10	8	8	11	9	9
10	P.A.H. Solapur University Solapur	11	13	11	12	11	12	11	10
11	Dr. Babasaheb Ambedkar Marathwada University Aurangabad	12	10	7	10	12	10	8	11
12	North Maharashtra University Jalgaon	9	11	13	11	10	8	9	12
13	S.G.B. Amravati University Amravati	13	14	9	13	9	14	13	13
14	S.R.T.M. University, Nanded	14	12	12	14	13	13	14	14
15	Gondwana University Gadchiroli	15	15	15	15	14	15	15	15

Note – Based on mean scores of 7 Criteria of Quality Assessments & CGPA.



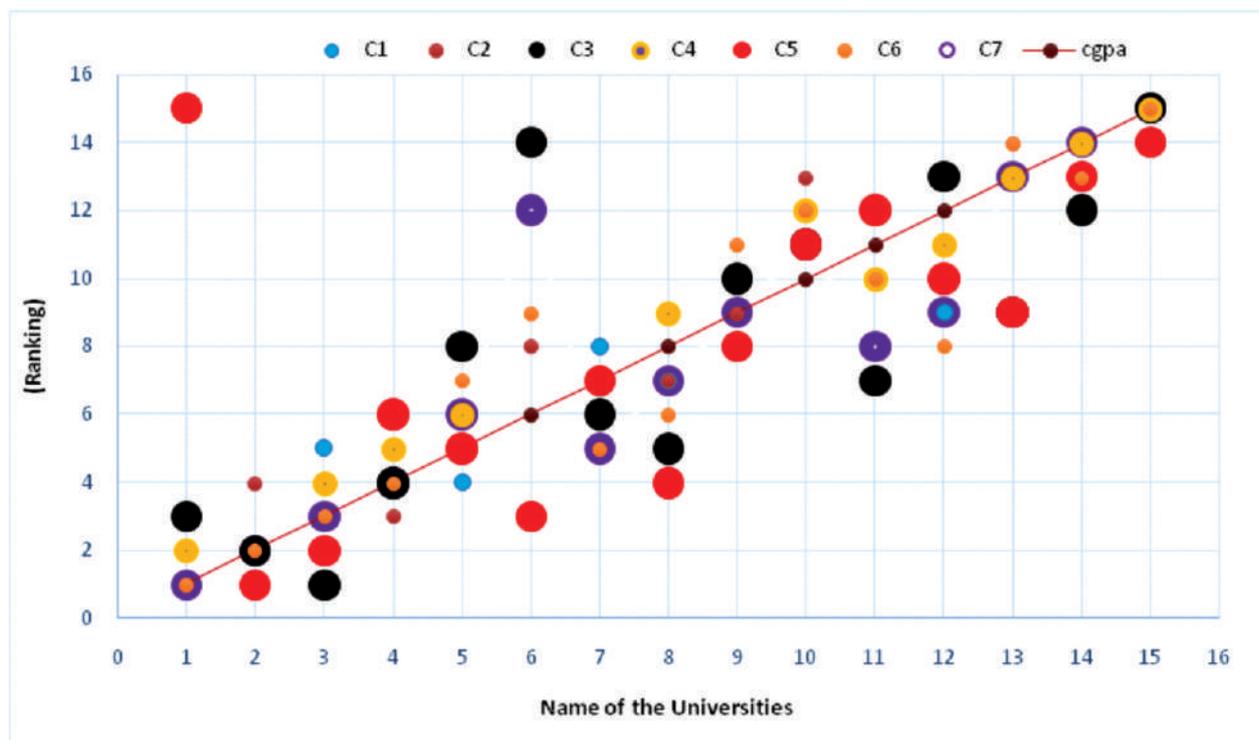


Fig. 4.8: Relative Performance (Ranking\*) of the Accredited Colleges under different Affiliated Universities

Note – Numbers given on horizontal axis are the serial numbers and positions of universities given in table 4.16.

### 4.3.9 Comparison-wise and Overall Performance of Colleges

The analysis of the performance of accredited colleges using seven evaluation criteria and overall performance (CGPA) scores are compared in relation to the key attributes such as location, source of funding, gender specific and colleges with special status or tags (Minority, Autonomous, constituents). For the purpose, we have used 't' and ANOVA for the purpose of testing the set hypothesis.

#### *i. Women and Co-education Colleges*

It was felt necessary to find if the performance of women colleges significantly differ from that of Co-education colleges, we have carried out 't' test for all evaluation criteria and CGPA. From the results presented in table 4.17, it can be noticed that both Levene's test of equality and variance and 't' test do not reject null hypothesis for any criterion of evaluation, indicating observed differences between mean scores of women and co-education accredited colleges are merely due to chance and not gender specific. It also clearly establishes that on performance scale gender matters a little at least in the sample data that we got, although individually there may be exceptionally good women's colleges.



**Table 4.17 Test Results on Performance of Accredited Colleges based on type of the Colleges**

EC	Group Statistics	Type of Colleges {Co-education (N-1279; Women (N-87)}	Mean	Std. Dev	ASM	Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	Co-ed	2.67	0.602	a	0.35	NSS	0.78	1364	NSS
		Women	2.62	0.632	b			0.75	97	NSS
C2	Teaching - Learning and Evaluation	Co-ed	2.76	0.439	a	1.42	NSS	-1.09	1364	NSS
		Women	2.81	0.407	b			-1.17	100	NSS
C3	Research, Innovations and Extension	Co-ed	2.62	0.710	a	0.17	NSS	-1.06	1364	NSS
		Women	2.70	0.729	b			-1.03	97	NSS
C4	Infrastructure and Learning Resources	Co-ed	2.77	0.584	a	0.97	NSS	1.66	1364	NSS
		Women	2.66	0.661	b			1.51	95	NSS
C5	Student Support and Progression	Co-ed	2.34	0.626	a	0.03	NSS	-0.63	1364	NSS
		Women	2.38	0.634	b			-0.62	98	NSS
C6	Governance, Leadership and Management	Co-ed	2.46	0.581	a	0.93	NSS	-0.48	1364	NSS
		Women	2.49	0.624	b			-0.45	96	NSS
C7	Institutional Values and Best Practices	Co-ed	2.49	0.643	a	0.18	NSS	-0.98	1364	NSS
		Women	2.56	0.657	b			-0.96	98	NSS
CGPA		Co-ed	2.63	0.459	a	0.21	NSS	-0.48	1364	NSS
		Women	2.65	0.458	b			-0.48	98	NSS

Note: EC= Evaluation Criteria; ASM = Assumption; a = H<sub>0</sub>:  $\sigma_1 = \sigma_2$ ; b = H<sub>a</sub>:  $\sigma_1 \neq \sigma_2$ ; N= Number of cases/sample colleges; NSS= Estimates are not statistically significant; Estimates are statistically significant at \*\*\*(1%); \*\* (5%); \*(10%)

### **ii. Status of Colleges**

The results presented in tables 4.18 (a) & 4.18(b) indicate that the performance scores of accredited colleges are significantly different across status of the colleges for all the evaluation criteria indicators. The rejection of H<sub>0</sub> at 1% level of significance, indicate that accredited colleges with minority and autonomous status showed better performance as compared to general colleges across all the evaluation criteria and overall performance level.



Table 4.18 (a) Test Results on Performance of Accredited Colleges based on Status of College

EC	Group Statistics	College Type	Mean	Std. Dev	ASM	Levene's Test		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	Minority	2.91	0.514	a	10.70	***	4.66	1365	***
		General	2.64	0.607	b			5.34	145	***
C2	Teaching - Learning and Evaluation	Minority	3.00	0.457	a	0.01	NSS	6.29	1365	***
		General	2.74	0.429	b			5.96	133	***
C3	Research, Innovations and Extension	Minority	2.98	0.581	a	10.15	***	5.66	1365	***
		General	2.59	0.713	b			6.72	148	***
C4	Infrastructure and Learning Resources	Minority	3.05	0.503	a	6.83	***	5.38	1365	***
		General	2.74	0.591	b			6.15	145	***
C5	Student Support and Progression	Minority	2.70	0.625	a	0.96	NSS	6.54	1365	***
		General	2.31	0.616	b			6.46	135	***
C6	Governance, Leadership and Management	Minority	2.76	0.520	a	2.33	NSS	5.79	1365	***
		General	2.44	0.582	b			6.36	142	***
C7	Institutional Values and Best Practices	Minority	2.76	0.642	a	0.00	NSS	4.66	1365	***
		General	2.47	0.638	b			4.64	136	***
CGPA		Minority	2.92	0.405	a	1.74	NSS	7.34	1365	***
		General	2.60	0.454	b			8.07	142	***

Table 4.18 (b) Test Results on Performance of Accredited Colleges based on Status of College

EC	Group Statistics	CollegeType	Mean	Std. Dev	ASM	Levene's Test		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	Autonomous	3.34	0.327	a	29.18	***	10.39	1365	***
		General	2.63	0.593	b			17.42	107	***
C2	Teaching-Learning and Evaluation	Autonomous	3.39	0.294	a	12.94	***	13.72	1365	***
		General	2.72	0.416	b			18.64	94	***
C3	Research, Innovations and Extension	Autonomous	3.27	0.433	a	28.48	***	8.36	1365	***
		General	2.59	0.706	b			12.81	100	***
C4	Infrastructure and Learning Resources	Autonomous	3.46	0.327	a	27.94	***	11.06	1365	***
		General	2.73	0.576	b			18.11	105	***
C5	Student Support and Progression	Autonomous	3.15	0.604	a	2.95	NSS	12.20	1365	***
		General	2.29	0.594	b			12.03	84	***
C6	Governance, Leadership and Management	Autonomous	3.27	0.342	a	23.94	***	13.08	1365	***
		General	2.42	0.560	b			20.12	100	***
C7	Institutional Values and Best Practices	Autonomous	3.31	0.366	a	32.03	***	11.92	1365	***
		General	2.45	0.624	b			18.99	103	***
CGPA		Autonomous	3.32	0.246	a	27.24	***	14.61	1365	***
		General	2.59	0.435	b			23.98	105	***

Note: ASM = Assumption; a = H<sub>0</sub>:  $\sigma_1 = \sigma_2$ ; b = H<sub>a</sub>:  $\sigma_1 \neq \sigma_2$ ; NSS= Estimates are not statistically significant; Estimates are statistically significant at \*\*\*(1%); \*\* (5%); \*(10%).



### iii. Location of the Colleges

The performance of the accredited colleges across the seven-evaluation criteria and CGPA scores differ across the location of the colleges due to regional and locational advantages. It is believed that accredited colleges in urban areas fare better than colleges located in semi-urban, rural or tribal areas. In order to test the hypothesis that “the performance of accredited colleges is not associated with location of colleges”; we have performed 'One Way ANOVA (F test) and 't' test. The objective is to know whether our H0 (null hypothesis) that “the mean average scores of performance indicators are same for the all the categories of location” stands for validation.

**Table 4.19 (a) Test Results on Performance of Accredited Colleges based on Location of the Colleges**

EC	Group Statistics	Location	Mean	Std. Dev	ANOVA 'f' Test		
					df	F	Sig.
C1	Curricular Aspects	Urban	2.87	0.548	3	48.75	***
		Semi-urban	2.65	0.631			
		Rural	2.48	0.590			
		Tribal	2.32	0.492			
C2	Teaching - Learning and Evaluation	Urban	2.89	0.443	3	42.71	***
		Semi-urban	2.78	0.445			
		Rural	2.62	0.387			
		Tribal	2.61	0.349			
C3	Research, Innovations and Extension	Urban	2.74	0.716	3	11.11	***
		Semi-urban	2.66	0.737			
		Rural	2.50	0.687			
		Tribal	2.58	0.572			
C4	Infrastructure and Learning Resources	Urban	2.97	0.521	3	58.00	***
		Semi-urban	2.79	0.609			
		Rural	2.57	0.573			
		Tribal	2.35	0.601			
C5	Student Support and Progression	Urban	2.51	0.643	3	30.64	***
		Semi-urban	2.34	0.648			
		Rural	2.17	0.559			
		Tribal	2.16	0.484			
C6	Governance, Leadership and Management	Urban	2.60	0.593	3	27.87	***
		Semi-urban	2.53	0.573			
		Rural	2.31	0.539			
		Tribal	2.29	0.526			
C7	Institutional Values and Best Practices	Urban	2.65	0.638	3	24.54	***
		Semi-urban	2.48	0.680			
		Rural	2.34	0.595			
		Tribal	2.32	0.682			
CGPA		Urban	2.78	0.448	3	51.73	***
		Semi-urban	2.65	0.477			
		Rural	2.47	0.411			
		Tribal	2.45	0.387			

Note: N= Number of cases/sample colleges; Urban=600, Semi-urban= 169; Rural=558; Tribal= 40; NSS= Estimates are not statistically significant; Estimates are statistically significant at \*\*\*(1%); \*\* (5%); \*(10%)



The results presented in Table 4.19 (a) indicate that the performance scores of accredited colleges are significantly different across the categories of location for all the evaluation criteria. The rejection of H<sub>0</sub> at 1% of significance level, does not validate our position that performance of accredited colleges has nothing to do with location. It is indicated by the test that location of the college has significant influence on the performance of the college. Among all locations, accredited colleges in tribal location have the lowest average scores across all the evaluation criteria. The accredited colleges located in urban areas perform better compared to those in semi-urban, rural and tribal areas.

**Table 4.19 (b) Test Results on Performance of Accredited Colleges based on Location of the Colleges**

EQ	Group Statistics	Location {Rural (N-598; Urban (N-769)}	Mean	Std. Dev	ASM	Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	Rural	2.47	0.585	a	0.41	NSS	-11.1	1365	***
		Urban	2.82	0.574	b			-11.0	1272	***
C2	Teaching-Learning and Evaluation	Rural	2.62	0.384	a	10.50	***	-10.8	1365	***
		Urban	2.87	0.446	b			-11.1	1351	***
C3	Research, Innovations and Extension	Rural	2.51	0.680	a	2.30	NSS	-5.6	1365	***
		Urban	2.72	0.721	b			-5.6	1316	***
C4	Infrastructure and Learning Resources	Rural	2.55	0.577	a	5.48	**	-12.4	1365	***
		Urban	2.93	0.546	b			-12.3	1248	***
C5	Student Support and Progression	Rural	2.17	0.554	a	12.54	***	-9.0	1365	***
		Urban	2.47	0.648	b			-9.2	1352	***
C6	Governance, Leadership and Management	Rural	2.31	0.538	a	6.76	***	-9.0	1365	***
		Urban	2.58	0.589	b			-9.1	1330	***
C7	Institutional Values and Best Practices	Rural	2.34	0.600	a	4.48	**	-8.0	1365	***
		Urban	2.62	0.651	b			-8.0	1326	***
CGPA		Rural	2.47	0.409	a	8.24	***	-11.9	1365	***
		Urban	2.75	0.457	b			-12.1	1339	***

Note: ASM = Assumption; a = H<sub>0</sub>:  $\sigma_1 = \sigma_2$ ; b = H<sub>a</sub>:  $\sigma_1 \neq \sigma_2$ ; N = Number of cases/sample colleges; NSS = Estimates are not statistically significant; Estimates are statistically significant at \*\*\* (1%); \*\* (5%); \* (10%).

Similarly, when we merge semi-urban colleges with urban and tribal colleges with rural colleges, the results of test ('t') do not change (Table 4.19 (b)). The difference between the performance of urban and rural colleges exist for all the evaluation criteria. The average scores of urban accredited colleges exceed significantly than those of rural colleges. Levene's Test for Equality in variance indicate significant difference in the variance of two independent samples (Rural and Urban) except curricular aspect and Research innovation and extension. Our results are still robust to violations of homogeneity assumption, as the sample size of rural and urban accredited colleges is reasonably similar.



### iv. Government and Government-aided and Self-financed Colleges

To assess the role of source of funding on the performance of accredited colleges, we carried out similar exercise using 't' test. From the results presented in table 4.20, it is observed that as far as curricular aspects, research innovation and extension, infrastructure and learning resources, governance, leadership and management and institutional values and best practices are concerned there exist significant difference in the average performance (mean) scores between Govt. and Govt.-aided colleges and private unaided/self-financed accredited colleges.

**Table 4.20 Test Results on Performance of Accredited Colleges based on Source of Funding of the Colleges**

EC	Group Statistics	Source of Financing {Govt. & Aided (N-837; Private (N-530)}	Mean	Std. Dev	ASM	Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	t	df	Sig.
C1	Curricular Aspects	Govt. & Govt.- aided	2.57	0.607	a	5.70	**	-7.88	1365	***
		Private (unaided)	2.82	0.565	b			-8.00	1184	***
C2	Teaching - Learning and Evaluation	Govt. & Govt.- aided	2.77	0.452	a	2.64	*	0.98	1365	NSS
		Private (unaided)	2.75	0.413	b			1.00	1200	NSS
C3	Research, Innovations and Extension	Govt. & Govt.- aided	2.69	0.711	a	1.46	NSS	4.55	1365	***
		Private (unaided)	2.52	0.698	b			4.57	1141	***
C4	Infrastructure and Learning Resources	Govt. & Govt.- aided	2.66	0.616	a	35.01	***	-8.98	1365	***
		Private (unaided)	2.94	0.499	b			-9.41	1285	***
C5	Student Support and Progression	Govt. & Govt.- aided	2.34	0.653	a	9.85	***	-0.38	1365	NSS
		Private (unaided)	2.35	0.582	b			-0.39	1218	NSS
C6	Governance, Leadership & Management	Govt. & Govt.- aided	2.49	0.595	a	2.14	NSS	1.98	1365	**
		Private (unaided)	2.42	0.564	b			2.00	1170	**
C7	Institutional Values & Best Practices	Govt. & Govt.- aided	2.51	0.675	a	10.72	***	0.78	1365	NSS
		Private (unaided)	2.48	0.591	b			0.81	1232	NSS
CGPA		Govt. & Govt.- aided	2.62	0.485	a	15.59	***	-0.68	1365	NSS
		Private (unaided)	2.64	0.414	b			-0.71	1252	NSS

Note: ASM = Assumption; a = H0:  $\sigma_1 = \sigma_2$ ; b = Ha:  $\sigma_1 \neq \sigma_2$ ; N = Number of cases/sample colleges; NSS = Estimates are not statistically significant; Estimates are statistically significant at \*\*\* (1%); \*\* (5%); \* (10%)





However, we do not find significant difference in terms of overall performance (CGPA) between Govt. and Govt. aided accredited colleges and self-financed accredited colleges. The null hypothesis failed to reject at all significance levels (1%, 5% and 10%). This is largely because, the performance of the Govt. & Govt. aided colleges exceeds in the areas of governance, leadership and management and research and innovation; whereas self-financed accredited colleges show far better performance in curricular aspects and infrastructure and learning resources. In other areas such as teaching learning and evaluation, student support and progression and institutional values and best practices, average scores of both Govt. and Govt. aided colleges and private/self-financed accredited colleges do not show large differences. The observed difference in mean scores are not statistically significant.

#### **4.3.10 Influence of Source of Funding, Location and their Interaction on the Performance of Accredited Colleges**

Two-way ANOVA used to measure the influence of two different ordinal independent variables on one continuous dependent variable simultaneously. It permits examining the impact of each independent variable as well as the impact any interaction that may exist among the treatments of independent variables. In this section, we have used two independent variables, viz. source of funding and location of accredited colleges to study the influence of two independent variables and their interaction on seven criteria and overall performance indicator (CGPA). For this purpose, we have considered two sets of accredited colleges; i) Government and Government-aided colleges which are under government control and private colleges receiving grant-in-aid from the State and Central government, ii) private colleges which are totally self-financed. Similarly, for the location variable, we have considered colleges which are located in rural and urban areas. The colleges located in semi-urban areas are clubbed with urban areas, whereas colleges in tribal location are clubbed in rural areas.

The statistical tests using {2 X 2} Factorial Design ANOVA for measuring the influence of source of funding and location factors on each evaluation criteria scores were carried out, and the results of tests are presented together in tables 4.21 and 4.22. The graphical representation of estimated marginal means of each performance evaluation criteria indicator/ scores are presented in figures 4.9 to 4.16. From table 4.21, it can be observed that location and interaction of location and source of funding have a significant influence on performance evaluation criteria and overall performance scores of the accredited colleges. Even if the influence of source of funding in case of a) student support and progression, b) institutional values and best practices and c) overall performance scores found to statistically insignificant, in five out of seven criteria indicators, the source of funding has shown significant difference in their performances. The criterion-wise influence of source of funding and location is given below.





**Table 4.21 Estimated Marginal Means of Seven Evaluation Criteria Scores based on Location and Source of Funding of Accredited Colleges**

EC	Source of Funding	Source of Funding	Location		
			Rural	Urban	Total
C1	Curricular Aspects	Govt. and Govt.-aided	2.38	2.76	2.57
		Private (Un-aided)	2.70	2.88	2.82
		Total	2.47	2.82	2.67
C2	Teaching - Learning and Evaluation	Govt. and Govt.-aided	2.61	2.94	2.77
		Private (Un-aided)	2.65	2.79	2.75
		Total	2.62	2.87	2.76
C3	Research, Innovations and Extension	Govt. and Govt.-aided	2.53	2.87	2.69
		Private (Un-aided)	2.45	2.55	2.52
		Total	2.51	2.72	2.63
C4	Infrastructure and Learning Resources	Govt. and Govt.-aided	2.44	2.88	2.66
		Private (Un-aided)	2.85	2.99	2.94
		Total	2.55	2.93	2.77
C5	Student Support and Progression	Govt. and Govt. -aided	2.14	2.54	2.34
		Private (Un-aided)	2.26	2.39	2.35
		Total	2.17	2.47	2.34
C6	Governance, Leadership and Management	Govt. and Govt.-aided	2.29	2.70	2.49
		Private (Un-aided)	2.35	2.46	2.42
		Total	2.31	2.58	2.46
C7	Institutional Values and Best Practices	Govt. and Govt.-aided	2.32	2.71	2.51
		Private (Un-aided)	2.41	2.51	2.48
		Total	2.34	2.62	2.50
GGPA		<b>Govt. and Govt.-aided</b>	<b>2.44</b>	<b>2.81</b>	<b>2.62</b>
		<b>Private (Un-aided)</b>	<b>2.55</b>	<b>2.68</b>	<b>2.64</b>
		<b>Total</b>	<b>2.47</b>	<b>2.75</b>	<b>2.63</b>

Note – Boxes with green colour shed indicate statistically significant difference and colour shed in orange show difference is statistically insignificant.





Table 4.22 Results of 2 x 2 Factorial Design ANOVA for Location and Source of Funding

Sl. No.	Evaluation Criteria	Factors	Sum of Squares	df	Mean Square	F	Sig.
C1	Curricular Aspects	Location	23.58	1	23.58	72.71	***
		Source of Funding	14.59	1	14.59	45.00	***
		Location* Source of Funding	3.281	1	3.28	10.12	***
C2	Teaching-Learning and Evaluation	Location	16.24	1	16.24	93.78	***
		Source of Funding	0.82	1	0.82	4.75	**
		Location* Source of Funding	2.85	1	2.85	16.47	***
C3	Research, Innovations and Extension	Location	14.50	1	14.50	30.18	***
		Source of Funding	11.94	1	11.94	24.85	***
		Location* Source of Funding	4.48	1	4.48	9.33	***
C4	Infrastructure and Learning Resources	Location	25.30	1	25.30	85.13	***
		Source of Funding	19.36	1	19.36	65.14	***
		Location* Source of Funding	7.05	1	7.05	23.73	***
C5	Student Support and Progression	Location	21.32	1	21.32	58.20	***
		Source of Funding	0.07	1	0.07	0.20	NSS
		Location* Source of Funding	5.53	1	5.53	15.11	***
C6	Governance, Leadership and Management	Location	20.06	1	20.06	63.84	***
		Source of Funding	2.38	1	2.38	7.58	***
		Location* Source of Funding	6.45	1	6.45	20.51	***
C7	Institutional Values and Best Practices	Location	18.23	1	18.23	46.67	***
		Source of Funding	0.80	1	0.80	2.05	NSS
		Location* Source of Funding	6.05	1	6.05	15.48	***
GGPA		<b>Location</b>	<b>19.20</b>	<b>1</b>	<b>19.20</b>	<b>102.47</b>	<b>***</b>
		<b>Source of Funding</b>	<b>0.04</b>	<b>1</b>	<b>0.04</b>	<b>0.19</b>	<b>NSS</b>
		<b>Location* Source of Funding</b>	<b>4.59</b>	<b>1</b>	<b>4.59</b>	<b>24.47</b>	<b>***</b>

Note -NSS= Estimates are not statistically significant; Estimates are statistically significant at \*\*\*(1%); \*\* (5%); \*(10%). Df= Degrees of freedom;

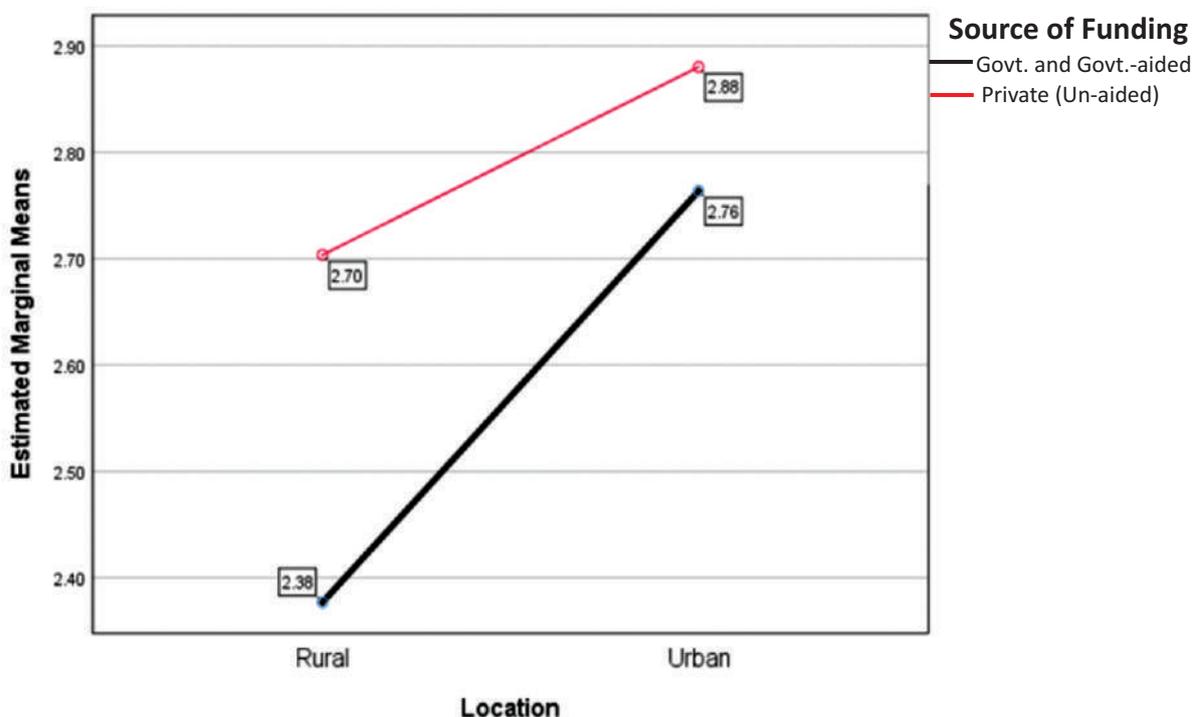




### *i. Curricular Aspects*

The location and source of funding have a significant influence on curricular aspect scores. The estimated marginal mean scores of curricular aspects for private un-aided /self-financed accredited colleges located in urban areas (2.70 point – see Table 4.21 and Fig.4.9) found to be significantly higher than those of rural areas (2.88 point). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in urban areas are much higher (2.76 point) than those in rural areas (2.36 point). The results clearly show that not only there are significant difference in marginal scores of curricular aspects between rural (2.47 point) and urban areas (2.82 point), but also between the Government and Government-aided (2.57 point) and self-financed (2.82 point) accredited colleges (Table 4.21). Apart from these, the interaction effect of location and source of funding also found to be statistically significant (Table 4.22). F values for location (23.58), source of funding (45) and interaction of location and source of funding (10.12) found to statistically significant at 1% level of significance.

**Fig. 4.9: Estimated Marginal Means : Curricular Aspects**



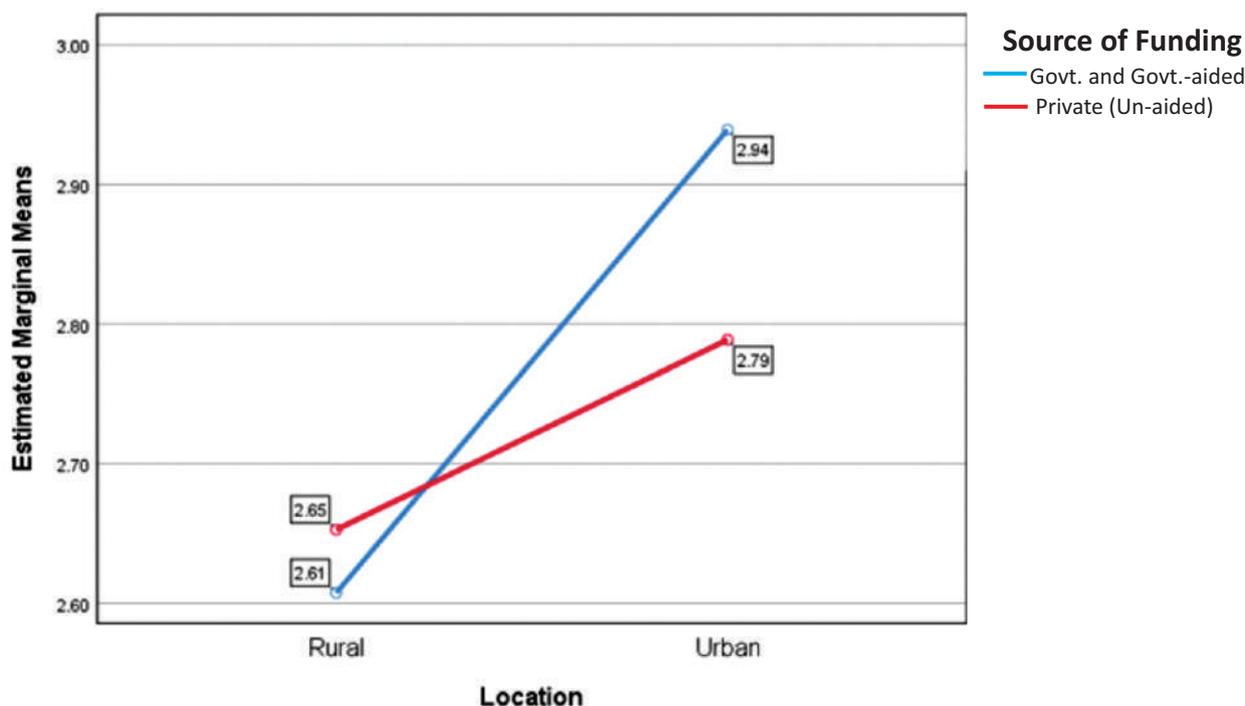
### *ii. Teaching - Learning and Evaluation*

The location and source of funding have a significant influence on teaching and evaluation scores. The estimated marginal mean scores of teaching and evaluation for private un-aided /self-financed accredited colleges located in urban areas (2.79 point) found to be significantly higher than those of rural areas (2.65 point– see Table 4.21 and Fig. 4.10). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in



urban areas are much higher (2.94 point) than those in rural areas (2.61 point). The results clearly show that not only there is significant difference in marginal scores of teaching-learning and evaluation between rural (2.62 point) and urban areas (2.87 point), but also between the Government and Government-aided (2.77 point) and self-financed (2.75 point) accredited colleges (Table 4.21). The interaction effect of location and source of funding also found to be statistically significant (Table 4.22). F values for location (9.78), source of funding (4.75) and interaction of location and source of funding (16.47) found to statistically significant at 1% level of significance.

**Fig. 4.10: Estimated Marginal Means : Teaching – Learning and Evaluation**



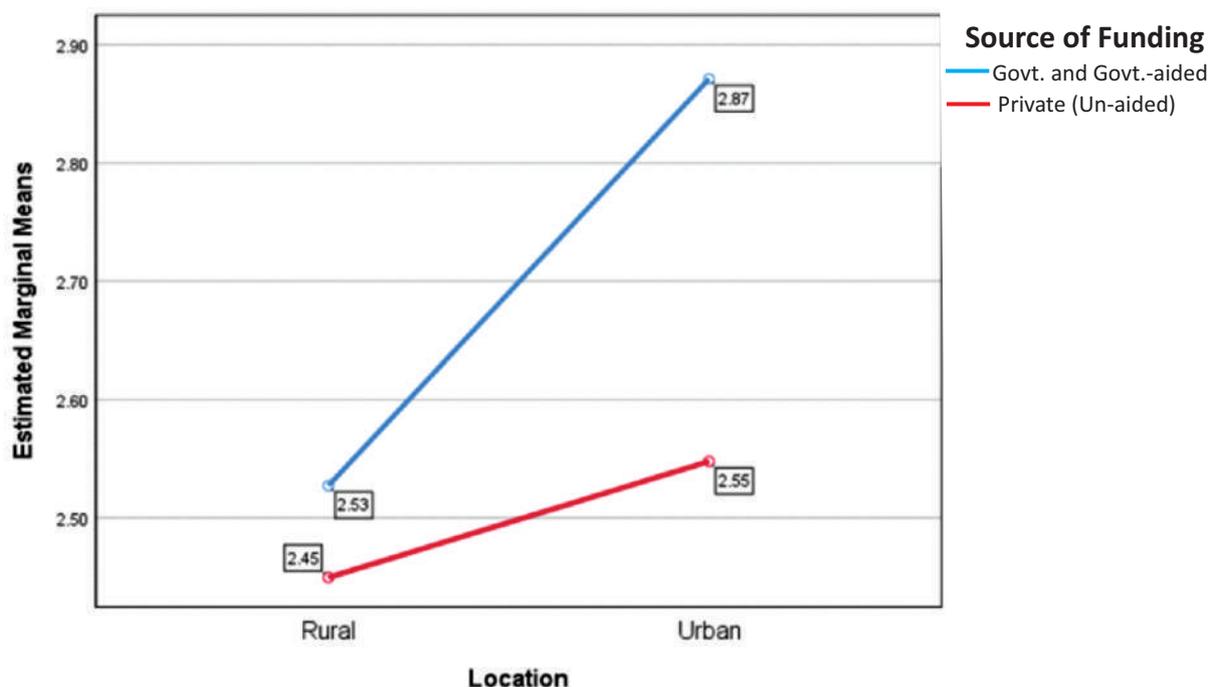
### *iii. Research, Innovations and Extension*

The location and source of funding have a significant influence on mean scores of research innovation and extension. The estimated marginal mean scores of research innovation and extension for private un-aided /self-financed accredited colleges located in urban areas (2.55 point) found to be significantly higher than those of rural areas (2.45 point– see Table 4.21 and Fig. 4.11). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in urban areas are much higher (2.87 point) than those in rural areas (2.53 point). The results clearly show significant difference in marginal mean scores of research innovation and extension between rural (2.51 point) and urban (2.72 point) areas and between the Government and Government-aided (2.69 point) and private un-aided (2.52 point) accredited colleges (Table 4.21). The interaction effect of location and source of funding also observed to be statistically significant (Table 4.22). F values for location (30.18),



source of funding (24.85) and interaction of location and source of funding (9.33) are statistically significant at 1% level of significance.

**Fig. 4.11: Estimated Marginal Means : Research, Innovations and Extension**

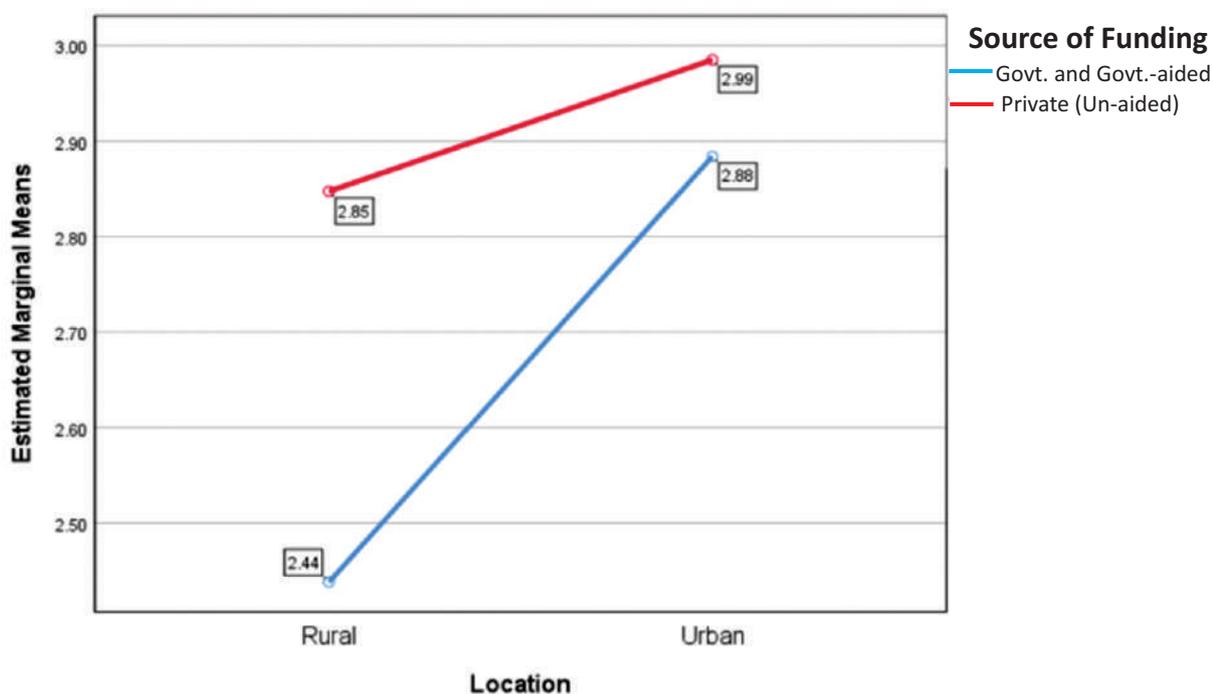


#### *iv. Infrastructure and Learning Resources*

The location and source of funding have a significant influence on mean scores of infrastructures and learning resources. The estimated marginal mean scores of infrastructures and learning resources for private un-aided accredited colleges located in urban areas (2.88 point) found to be significantly higher than those of rural areas (2.44 point—see Table 4.21 and Fig. 4.12). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in urban areas are much higher (2.99 point) than those in rural areas (2.85 point). The results clearly underline significant difference in marginal mean scores of infrastructures and learning resources between rural (2.55 point) and urban (2.93 point) areas and between the Government and Government-aided (2.34 point) and private unaided (2.94 point) accredited colleges. The interaction effect of location and source of funding also observed to be statistically significant (Table 4.22). F values for location (85.13), source of funding (65.14) and interaction of location and source of funding (23.73) are statistically significant at 1% level of significance.



Fig. 4.12: Estimated Marginal Means : Infrastructure and Learning Resources

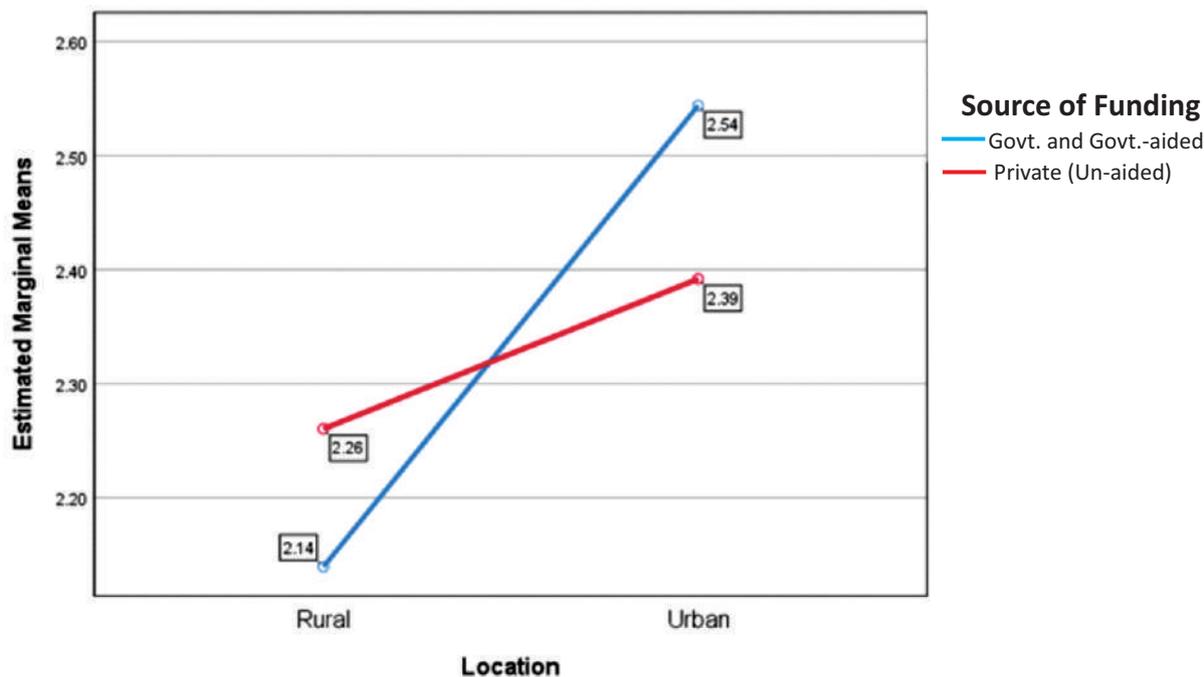


#### v. Student Support and Progression

The location has a significant influence on mean scores of student support and progression. However, for source of funding we did not show statistically significant difference in the mean scores even at 90% confidence level. The estimated marginal mean scores of student support and progression for private un-aided accredited colleges located in urban areas (2.39 point) found to be significantly higher than those of rural areas (2.26 point– see Table 4.21 and Fig. 4.13). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in urban areas are much higher (2.54 point) than those in rural areas (2.39 point). The results clearly show significant difference in marginal mean scores of student support and progression between rural (2.17 point) and urban (2.47 point) areas, but not between the Government and Government-aided (2.34 point) and private un-aided (2.35 point) accredited colleges. That is difference in the mean scores of student support and progression between Govt. and Govt.-aided and self-financed accredited colleges was on 0.01 point (Table 4.21). The interaction effect of location and source of funding also observed to be statistically significant (Table 4.22). F values for location (58.20), and interaction of location and source of funding (15.11) are statistically significant at 1% level of significance.



Fig. 4.13: Estimated Marginal Means : Student Support and Progression

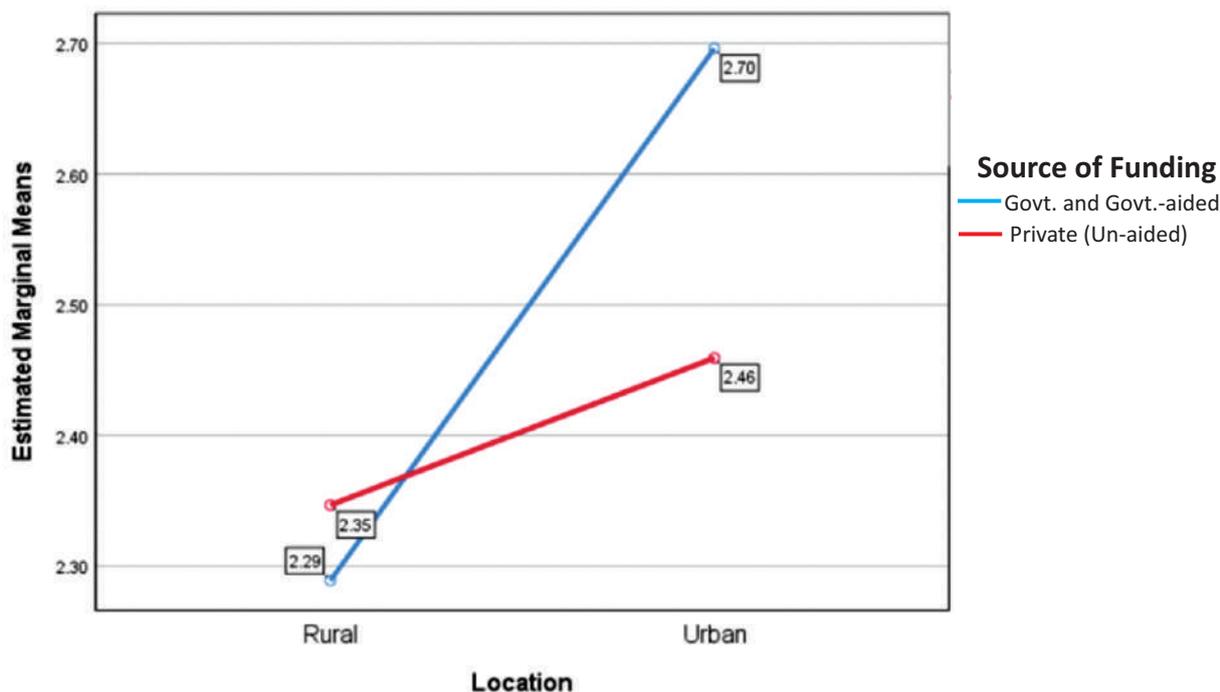


#### *vi. Governance, Leadership and Management*

The location and source of funding have a significant influence on governance, leadership and management scores. The estimated marginal mean scores of governance, leadership and management for private un-aided accredited colleges located in urban areas (2.46 point) found to be significantly higher than those of rural areas (2.35 point– see Table 4.21 and Fig.4.14). Similarly, the estimated marginal means scores of Govt. and Govt.- aided accredited colleges located in urban areas are much higher (2.70 point) than those in rural areas (2.29 point). The results clearly show that not only there are significant difference in marginal scores of governance, leadership and management between rural (2.31 point) and urban (2.58 point) areas, but also between the government and government-aided (2.49 point) and private un-aided (2.42 point) accredited colleges. The interaction effect of location and source of funding also found to be statistically significant (Table 4.22). F values for location (63.84), source of funding (7.58) and interaction of location and source of funding (20.51) found to statistically significant at 1% level of significance.



Fig. 4.14: Estimated Marginal Means : Governance, Leadership and Management

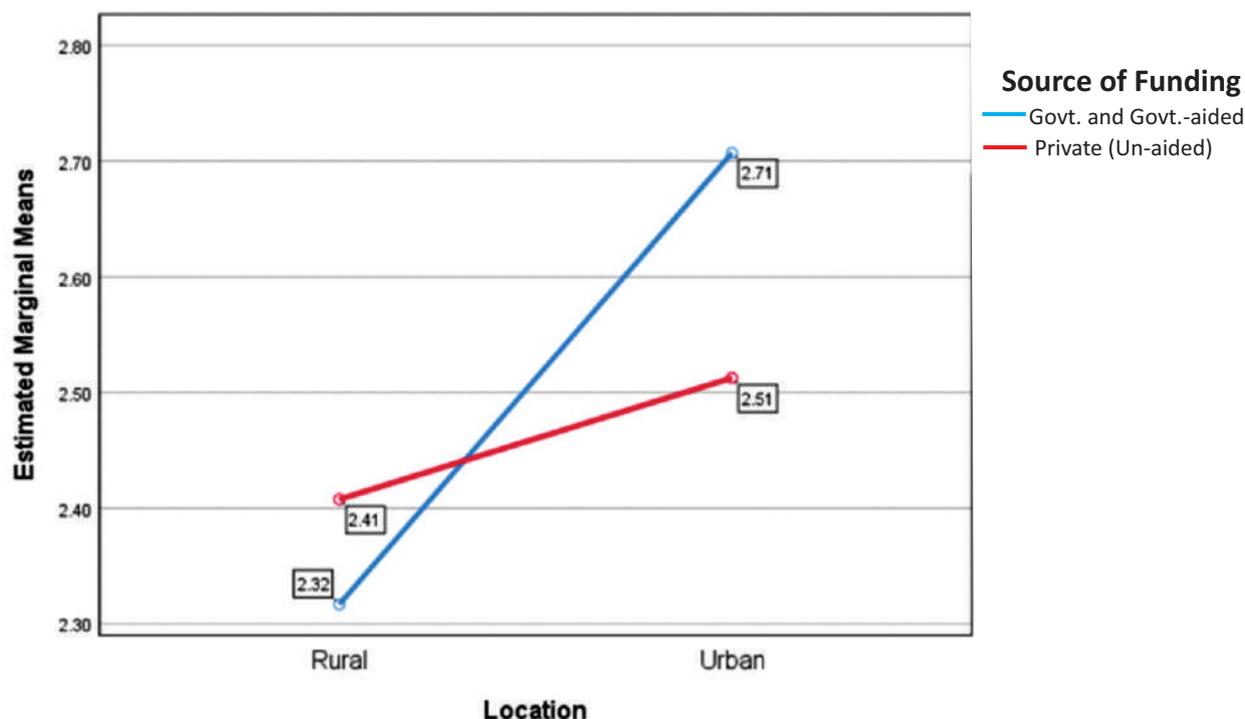


### vii. Institutional Values and Best Practices

The location has a significant influence on mean scores of institutional values and best practices. However, in the case of influence of source of funding was not statistically significant enough to accept difference in the mean scores of institutional values and best practices even at 90% confidence level. The estimated marginal mean scores of institutional values and best practices for private un-aided /self-financed accredited colleges located in urban areas (2.51 point – see Table 4.21 and Fig. 4.13) found to be significantly higher than those of rural areas (2.41 point). Similarly, the estimated marginal means scores of govt. and govt. aided accredited colleges located in urban areas are much higher (2.71 point) than those in rural areas (2.32 point). The figure and table clearly show significant difference in marginal mean scores of institutional values and best practices between rural (2.34 point) and urban (2.62 points) areas, but not between the government (2.51 point) and government-aided and private un-aided/self-financed (2.48 point) accredited colleges (Table 4.21). The interaction effect of location and source of funding also observed to be statistically significant (Table 4.22). F values for location (46.67), and interaction of location and source of funding (15.48) are statistically significant at 1% level of significance.



**Fig. 4.15: Estimated Marginal Means : Institutional Values and Best Practices**

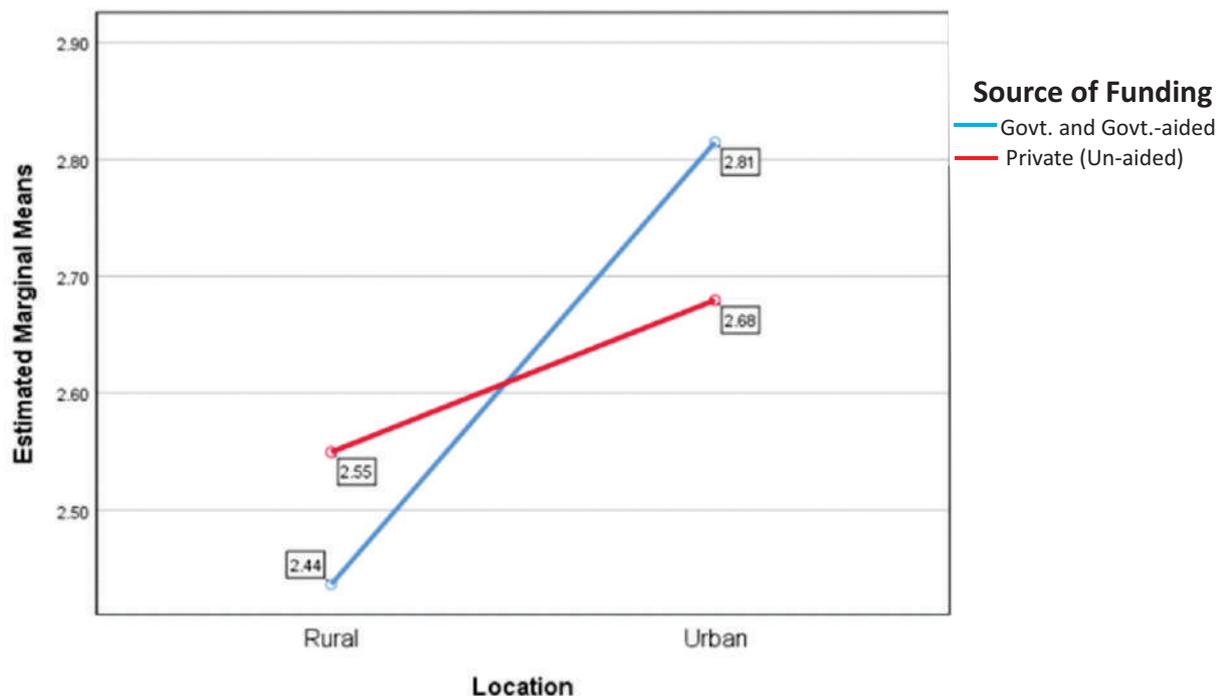


### *viii. Overall Performance*

The location has a significant influence on mean scores of overall performance (CGPAs). However, in the case of source of funding, we did not find any statistically significant difference in the mean scores of CGPAs even at 90% confidence level. The estimated marginal mean scores of CGPAs for private un-aided/self-financed accredited colleges located in urban areas (2.68 point) found to be significantly higher than those of rural areas (2.55 point—see Table 4.21 and Fig. 4.16). Similarly, the estimated marginal means scores of Govt. and Govt.-aided accredited colleges located in urban areas are much higher (2.81 point) than those in rural areas (2.44 point). The results clearly show significant difference in marginal mean scores of CGPAs between rural (2.47 point) and urban (2.75 point) areas, but not between the Government and Government-aided (2.64 point) and private unaided (2.65 point) accredited colleges. That is difference in the mean scores of CGPAs between Govt. and Govt.-aided and private un-aided accredited colleges was merely 0.01 point (Table 4.21). The interaction effect of location and source of funding, however, observed to be statistically significant (Table 4.22). F values for location (102.47), and interaction of location and source of funding (24.47) are statistically significant at 1% level of significance.



Fig. 4.16: Estimated Marginal Means : Overall Performance (CGPAs)



Details of the two-way ANOVA carried out in above tables have been summarised and presented in the table 4.23.

Table 4.23 Summary Results of Two-Way ANOVA for Seven Evaluation Criteria Scores

EC	Criteria	Influence of	Effect
C1	Curricular Aspects	Location	<ul style="list-style-type: none"> <li>Significant</li> <li>Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>Significant</li> <li>Private unaided/self-financed colleges have scored better</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>Significant</li> <li>Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>
C2	Teaching - Learning and Evaluation	Location	<ul style="list-style-type: none"> <li>Significant</li> <li>Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>Significant</li> <li>Private un-aided/self-financed colleges have scored better</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>Significant</li> <li>Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>



EC	Criteria	Influence of	Effect
C3	Research, Innovations & Extension	Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Private unaided/self-financed colleges have scored better</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>
C4	Infrastructure and Learning Resources	Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Private unaided/self-financed colleges have scored better</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>
C5	Student Support and Progression	Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Insignificant</li> <li>• Difference between mean scores of private unaided/self-financed and govt. and govt. -aided accredited colleges is insignificant (0.01 point)</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>
C6	Governance, Leadership & Management	Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Private unaided/self-financed colleges have scored better</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>
C7	Institutional Values and Best Practices	Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Insignificant</li> <li>• Difference between mean scores of private un-aided/self-financed and govt. and govt. -aided accredited colleges is insignificant (0.03 point)</li> </ul>



EC	Criteria	Influence of	Effect
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges Funding in urban areas have scored significantly better compared to those in rural areas</li> </ul>
<b>Overall Performance (CGPA)</b>		Location	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Urban colleges have scored better</li> </ul>
		Source of Funding	<ul style="list-style-type: none"> <li>• Insignificant</li> <li>• Difference between mean scores of private unaided/self-financed and govt. and govt.-aided accredited colleges is insignificant (0.02 point)</li> </ul>
		Location* Source of Funding	<ul style="list-style-type: none"> <li>• Significant</li> <li>• Both private un-aided/self-financed accredited colleges in urban areas have scored significantly better compared to those in rural areas</li> </ul>

#### 4.3.11 Grade-wise Distribution of Colleges

In this section, we have carried out analysis of overall performance of accredited colleges using grades in relation to the key attributes such as location, source of funding, gender specific and programmes offered by them. For the purpose, we have used 'Chi Square' for testing any relationship between grades and the key attributes.

##### *i. Distribution of Grades by Types of Colleges*

The statistical test conducted earlier for seven evaluation criteria show not much difference in the performance of Women and Co-education colleges in Maharashtra. As far as the distribution of grades across women and co-education colleges are concerned, we do not find much difference too (Table 4.24). A chi-square test of independence clearly demonstrates that there is no statistically significant association between grades and type of accredited colleges- co-education and women colleges -  $\sim \chi^2 (6 \text{ df}, N = 1367) = 1.81, p = .936$ .

**Table 4.24 Grade-wise distribution based on Type of Accredited Colleges**

	Co-education		Women		Total	
	No.	%	No.	%	No.	%
A	298	23.3	23	26.4	321	23.5
A+	45	3.5	2	2.3	47	3.4
A++	3	0.2	0	0.0	3	0.2
B	476	37.2	28	32.2	504	36.9
B+	205	16.0	16	18.4	221	16.2
B++	149	11.6	11	12.6	160	11.7
C	104	8.1	7	8.0	111	8.1
<b>Total</b>	<b>1280</b>	<b>100.0</b>	<b>87</b>	<b>100.0</b>	<b>1367</b>	<b>100.0</b>



## ii. Distribution of Grades across Location

The details provided in table 4.25 clearly indicate that the proportion of accredited colleges with higher grades (A++, A+ and A) is much higher for the colleges located in urban areas as compared to those in rural areas. Almost 52.5% of total tribal accredited colleges have received 'B' grades and 12.5% received 'C' grades. The corresponding figures for accredited colleges in rural, semi-urban and urban areas is quite less.

A chi-square test of independence showed that there is significant relation between grades and location of accredited colleges. The results are statistically significant at 1%, in both the cases - a) when grades are compared to location group (Rural\* & Urban\*)  $\sim \chi^2$  (6 df, N = 1367) = 113.40,  $p = .000$  (at 1%); and b) extended location group (Rural, Urban, Semi-urban & Tribal)  $\sim \chi^2$  (18 df, N = 1367) = 137.65,  $p = .000$  (at 1%), indicating significant difference in the distribution of grades between the location groups (Rural\*; Urban\*) and (Rural, Urban, Semi-urban & Tribal).

**Table 4.25 Grade-wise distribution based on Sources of Funding of Accredited Colleges**

Grade	Rural*						Urban*				Urban*(Urban + Semi-urban)		Total (Rural + Urban)	
	Rural		Tribal		Rural* (Rural + Tribal)		Urban		Semi-urban		No.	%	No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%				
A++	0	0.0	0	0.0	0	0.0	1	0.2	2	1.2	3	0.4	3	0.2
A+	6	1.1	0	0.0	6	1.0	33	5.5	8	4.7	41	5.3	47	3.4
A	75	13.4	5	12.5	80	13.4	202	33.7	39	23.1	241	31.3	321	23.5
B++	59	10.6	1	2.5	60	10.0	81	13.5	19	11.2	100	13.0	160	11.7
B+	94	16.8	8	20.0	102	17.1	97	16.2	22	13.0	119	15.5	221	16.2
B	264	47.3	21	52.5	285	47.7	154	25.7	65	38.5	219	28.5	504	36.9
C	60	10.8	5	12.5	65	10.9	32	5.3	14	8.3	46	6.0	111	8.1
<b>Total</b>	<b>558</b>	<b>100.0</b>	<b>40</b>	<b>100.0</b>	<b>598</b>	<b>100.0</b>	<b>600</b>	<b>100.0</b>	<b>169</b>	<b>100.0</b>	<b>769</b>	<b>100.0</b>	<b>1367</b>	<b>100.0</b>

## iii. Distribution of Grades of Accredited Colleges across Source of Funding

The details provided in table 4.26 clearly demonstrate that the Government accredited colleges have higher proportion of colleges with higher grades (A++, A+ and A) compared to Government-aided and private un-aided/self-financing colleges. Almost 60.9% of total Government accredited colleges have received 'A' grades as compared to Government-aided (27.7%) and self-financed (26.2%) colleges. The proportion of Government colleges receiving 'B to B++' grades is much less (34.7%) as compared to Government-aided (64%) and private un-aided (67.2%) accredited colleges.



**Table 4.26 Grade-wise distribution based on Sources of Funding of Accredited Colleges**

Grade	Government & Govt.-aided						Private (Un-aided/ Self-financed)		Total	
	Govt.		Govt.-aided		Govt. & Govt.- aided		No.	%	No.	%
	No.	%	No.	%	No.	%				
A++	0	0.0	2	0.2	2	0.2	1	0.2	3	0.2
A+	0	0.0	32	3.9	32	3.8	15	2.8	47	3.4
A	14	60.9	184	22.6	198	23.7	123	23.2	321	23.5
B++	1	4.3	86	10.6	87	10.4	73	13.8	160	11.7
B+	3	13.0	118	14.5	121	14.5	100	18.9	221	16.2
B	4	17.4	317	38.9	321	38.4	183	34.5	504	36.9
C	1	4.3	75	9.2	76	9.1	35	6.6	111	8.1
<b>Total</b>	<b>23</b>	<b>100.0</b>	<b>814</b>	<b>100.0</b>	<b>837</b>	<b>100.0</b>	<b>530</b>	<b>100.0</b>	<b>1367</b>	<b>100.0</b>

A chi-square test of independence showed that there is significant association between grade and sources of funding in both the cases when a) grades are compared to sources of funding with two groups (1. Govt. & Govt.-aided accredited colleges & 2. Private un-aided accredited colleges)  $\sim \chi^2$  (6 df, N = 1367) = 11.81, p = .066 (at 10%); and sources of funding with three groups (1. Govt., 2. Govt.-aided, and 3. Private un-aided)  $\sim \chi^2$  (12df, N = 1367) = 31.06, p = .002 (at 5%), indicating that there exists significant difference in the distribution of grades between Govt., Government -aided and private un-aided accredited colleges in Maharashtra.

#### ***iv. Distribution of Grades across Programmes Offered by the Colleges***

The accredited colleges offering education (46.7%), general education with professional courses (37.5%), medical (32.5%) and engineering and technology (32.5%) courses have received higher grades (A++, A+ and A) compared to colleges offering programmes such as social work (25%), general art, commerce and sciences (24%) and management (22.6%) courses (Table 4.27). The colleges offering such course also received 'B to B++' grades less proportions (48.4% to 68%) as compared to accredited colleges offering social work (75%), general art, commerce and sciences (65%) and management (69%) courses.



**Table 4.27 Grade-wise distribution based on Type of Programme/Courses run by Accredited Colleges**

Particulars	Grade	Engineering & Technology	Management	Medical & Allied	General	General & Professional	Law	Education	Social Work	Total
Number of Colleges	A++	1	0	0	2	0	0	0	0	3
	A+	10	6	0	24	3	0	3	1	47
	A	66	17	13	179	9	7	26	4	321
	B++	39	17	10	82	4	4	2	2	160
	B+	54	23	4	122	6	6	4	2	221
	B	59	30	12	348	10	10	24	11	504
	C	7	9	1	89	0	2	3	0	111
	<b>Total</b>	<b>236</b>	<b>102</b>	<b>40</b>	<b>846</b>	<b>32</b>	<b>29</b>	<b>62</b>	<b>20</b>	<b>1367</b>
Percentage to Total	A++	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
	A+	4.2	5.9	0.0	2.8	9.4	0.0	4.8	5.0	3.4
	A	28.0	16.7	32.5	21.2	28.1	24.1	41.9	20.0	23.5
	B++	16.5	16.7	25.0	9.7	12.5	13.8	3.2	10.0	11.7
	B+	22.9	22.5	10.0	14.4	18.8	20.7	6.5	10.0	16.2
	B	25.0	29.4	30.0	41.1	31.3	34.5	38.7	55.0	36.9
	C	3.0	8.8	2.5	10.5	0.0	6.9	4.8	0.0	8.1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

A chi-square test of independence clearly demonstrates that there is statistically significant association between grades and type of programmes/courses run by accredited colleges. The results show a significant difference in distribution of grades between different types of programmes/courses -  $\sim \chi^2$  (42 df, N = 1367) = 100.995, p = 0.000 (significant at 1%).



## Chapter – 5

# Qualitative Analysis of Peer Team Reports of Accredited Institutions in Maharashtra

### 5.1 Introduction

Modern Maharashtra is known as a progressive state with several high performing universities and HEIs that have made their mark for excellence. Its voluntary acceptance of the Assessment and Accreditation exercise is a proof of its strong desire to assume a hegemonic role in the field of higher education. A good number of universities and colleges in Maharashtra have voluntarily gone through the Assessment and Accreditation exercise.

The state has totally 64 universities with Mumbai University being one of the three universities established by the British Government in the year 1857. Other universities also can boast of long traditions, like the Deccan College with a standing of 200 years, the Tukadoji Maharaj University, Nagpur, Tilak Maharashtra Vidyapeeth, and the SNDT Women's University with a standing of almost a hundred years. Most universities have sprawling and green campuses. There is good diversity of functioning of these universities such as technical, medical, social sciences like economics and political science, linguistics, languages, cultural and heritage studies, management studies, mainstream education (Arts, Commerce, Science), defense, multi-disciplinary unitary university, RBI funded university, an exclusively Women's University (SNDT), Sanskrit studies for cultural, aesthetic needs, and so forth. So far 30 universities have undergone A & A process, while there are 32 universities that have not undergone even the 1<sup>st</sup> Cycle. Totally 9 universities have completed 1<sup>st</sup> Cycle, 8 universities have completed 2<sup>nd</sup> Cycle and 13 universities have completed 3<sup>rd</sup> Cycle of accreditation.

### 5.2 Summary

#### 5.2.1 Universities

##### *Criterion 1: Curricular Aspects*

All Universities enjoy administrative as well as academic autonomy and hence can frame and prescribe a good number of courses in various disciplines, trying to cater to both local and national needs. Some universities have autonomous departments. Most universities seem to be aware of this requirement and are in the process of widening choices. Most universities



have IQAC in place (from the 2<sup>nd</sup> Cycle in keeping with PT recommendations) with recommended structure of representation of faculty-wise members of BoS in the existing subjects from the various departments as also student representatives in several cases. Co-opted external experts in various subjects are invited in BoS. Feedback mechanisms are in place and operative in most cases though not meticulously analyzed. The practical applicability of most of the courses needs reviewing and strengthening by surveying and identifying the market and employer needs. Industry-Academy interface is increasing with representatives of industry and the corporate sector have been co-opted in the BoS as well as the IQAC in many cases. Tie up with foreign universities exists in some cases though it has to be undertaken in a significant way by all universities. (Periodic revision of the curricula and strict implementation has to be widespread). While the semester system has now been accepted, the introduction of the CBCS is slow and with limited choice of subjects where it is available. (Changes as per PT reports in the 2<sup>nd</sup> and subsequent cycles are implemented as compliance).

### ***Criterion 2: Teaching-Learning and Evaluation***

Merit based admission process is established in all universities with strict adherence to the state and central government reservation rules. In some cases, tests are held for admissions. In professional courses CET mode of admissions are followed. The dropout rate is marginal in most of the universities. Bridge and remedial courses are held in many cases. However, (mentoring needs are not systemic in many universities and need both structuring and expert participation). Use of ICT, usually available in most universities, is slow to come as training facilities and requirements are inadequate. Modern technology for administrative, academic and tracking and recording purposes is yet to be commonly utilized with zero-error expertise in many universities. LMS and MIS also need strengthening with regular training for the faculty and the non-teaching staff for increased efficiency and ease. As expected, the percentage of faculty with research degrees (M.Phil and Ph.D) is significantly increasing in most universities and there is high degree of awareness to pursue research. In a few cases, international experts are invited for academic interaction with staff and students. Research publication activity is also on the rise. All-out efforts for quality creation, enhancement, sustenance and review are the urgent need of the times in view of an assertive presence in the lists of international ranking of universities as well as high positions in NIRF performance.

### ***Criterion 3: Research, Innovation and Extension***

Almost all universities are sensitively aware of the need to enhance and strengthen their research quotient in view of competition on national as well as international levels. Most universities have established Research Committees or Centres with some universities even having established state-of-the-art Incubation Centres. A reasonable number of the faculty





possesses research degrees like M.Phil, Ph.D. In some cases, there are national and international awards obtained for publications. Some universities publish Research Journals. The IQACs play a crucial role in this activity with the help of the corporate and industrial units where Research and Development (R & D) are a beaten practice. IQACs, therefore, are enacting a pivotal role in quality enhancement and sustenance. Innovative research in the nature of land-to-lab breakthrough creativity is yet to show assertively, if it has to become practically relevant and revenue generating. Several universities are receiving good funding from the UGC under various schemes of RUSA. There is less than marginal contribution for research and publication from industry, philanthropic institutions and individuals and the Alumni. However, a number of universities have allocated funds as Seed Money to promote research activity in the faculty with grants for Minor/Major Research Projects (MRP). Some universities give seed money to colleges also. Extension activities are usually through the NSS Units in all universities, with village adoption, camps, surveys conducted for obtaining various data. Tree planting, *Swaccha Bharat* and similar activities of national engagement are regularly conducted.

#### ***Criterion 4: Infrastructure and Learning Resources***

Many universities in the state of Maharashtra having been established several years back and have spacious campuses stretching over hundreds of acres with the aesthetic aspect of refreshing greenery on the campus. A couple of universities function even in two separate campuses either in the same city or in another district(s) under the coverage of affiliation as the number of affiliated HEIs is around 800! Therefore, the scope for physical infrastructural growth and expansion is available. Sufficient number of classrooms, laboratories, library, support services like canteen, health centre, residential facilities, sports and cultural activities are generally available with an incremental approach as per needs. ICT infrastructure is available with good maintenance provisions in the budgets and under the guidance of Maintenance Committees in some universities. Most universities have incremental libraries with the addition of INFLIBNET, and other online sources for academic retrieval. One University is a UGC centre for CARE information. It has a long-standing EMRC studio also. Continuous resource flow is required for campus upkeep, security and beautification. Resource generation is likely to be a challenge for most of the universities. Most universities have become aware of launching online courses as well as online counseling. A few universities have initiated examinations related work through technology network and online connectivity with colleges.

#### ***Criterion 5: Student Support and Progression***

As a state policy Elections to Students Councils have been banned in the state though students have role in all universities in various forms for the sake of participatory





management. It is a great relief that almost all universities in the state are practically free from provocative party politics and political orientation inciting agitational disruptions and indiscipline, though a sharp awareness of social issues and student requirements is unmistakable in the young on the campuses. In sports activities there are achievements on national level and even beyond in some cases. Many universities have Fine Arts Centres, Health Centres and Foreign Students Centres. Grievance Redress, Anti-ragging and Prevention of Sexual Harassment Cells are mandatory and all universities have made relevant provisions. In this context the detailed guidelines and recommendations circulated under Saksham by the UGC need to be implemented meticulously. Most universities do not keep track of student progression after students pass out, resulting in a weak Alumni activity. In many cases the Alumni Associations are not registered. Data keeping in this context needs to be strengthened. The overall dropout rate is marginal and the passing percentage rate is quite high (even above 90%) in all universities. Training facilities for state and national level competitive examinations are available in a few universities and need boosting as employment avenues will widen up and students in Maharashtra have shown a growing inclination to join civil services (MPSC / UPSC) and similar jobs.

#### ***Criterion 6: Governance, Leadership and Management***

Governance in most universities is well-structured. The state Universities Act is operative. The Vision and Mission statements are properly and prominently highlighted by most of the universities. Their direct or indirect mention is embodied in the University Anthems written by noted literary and other stalwarts. Also, these university anthems are set to mellifluous tunes by talented music composers and are played in the beginning of all important functions and celebrations, helping to create a sublime mood. Many affiliated colleges also follow this practice. Even so, special conscious efforts will have to be made to incorporate the Vision and Mission ideals in the syllabi in various subjects. The approach is participatory with representation of the faculty and other personnel in various bodies such as Executive Council, Academic Council, Senate, Finance Committee, IQAC, BoS, NSS, and other several committees as per statutory requirements to facilitate decision making. The IQACs are expected to transcend their campuses in order to provide guidance and leadership to affiliated colleges. In a few universities this activity of mentoring (cluster) colleges for NAAC preparation has taken off under the flagship scheme Paramarsha of the UGC. Faculty is encouraged to participate in national, international conferences, seminars, symposia with financial support and leave facilities as a measure of quality sustenance. There is a scope for setting up MIS and training the entire staff to make use of it for desired outcomes, record keeping and data Bank. Similarly, initiating and monitoring of annual Academic, Administrative Audit (AAA) of affiliated colleges and HEIs is the responsibility of universities, though only a few universities have initiated the process with some success and periodicity.





### **Criterion 7: Institutional Values and Best Practices**

Since the 7<sup>th</sup> Criterion has a strong social, environmental and even ethical orientation, all universities are required to strengthen their social outreach programmes and various national missions as also produce tangible desired outcomes. For this purpose they have also to develop detailed Standard Operating Procedures (SOPs) for zero-error approach. They need to understand their “situatedness” through regular surveys, interactions, SWOT analysis, feedback from various stakeholders and make every effort to establish their social and national relevance. An equal emphasis on inculcation of moral, ethical values is also strongly desirable and advisable as required benchmarks of professional ethics. Additionally, Strategic Planning and review systems have to be developed and practiced by most universities. All universities have identified several Best Practices and they are following them. However, a meticulous analysis is not done generally to check the actual evidence of tangible desired outcomes. The findings / outcomes need wide dissemination for guidelines and inspiration to other institutions.

#### **Overall Observations:**

As for some of the specific observations it is necessary to mention that, as expected, the universities located in the urban region and receiving government and UGC funding outshine those without these resources in the rural ones. Universities with some autonomous departments, especially in the urban areas, seem to attract a good number of students from all over the country. This is one reason why the Savitribai Phule Pune University (SPPU) has a noticeable number of students from all over the country as well as from within the State itself. The Savitribai Phule Pune University (SPPU), Pune, has set up an Incubation Centre for startup grooming. It is also the UGC CARE centre. It gives Seed Money for Minor Research Projects even to the college teachers in the affiliated colleges. This facility is also practiced in the Mumbai University. It helps to boost research culture.

The high performance of urban universities is also due to their merit-based admissions approach.

The Deccan College in Pune has international student intake. It has excellent student-teacher ratio. This is the first university with Department of Archeology which enhances its demand from scholars interested in the subject. The department is also the mother of a few more Archeology departments in universities at Solapur, Aurangabad, Mumbai etc.

The Homi Bhabha Institute, Mumbai, is a multidisciplinary unitary university specializing in nuclear science and engineering and has positive feedback from international experts for its research publications.





Indira Gandhi Institute in Mumbai is funded by the Reserve Bank of India (RBI) and is equally strong in research and publication with the privilege of projects from the world-famous Bill and Melinda Gates Foundation. It commands 100% placement.

The Gokhale Institute of Politics and Economics, Pune, is both a teaching and research institute with high demand ratio. It generates good funds from research and consultancy and funding for projects.

The D. Y. Patil Deemed University, Mumbai, has a cafeteria approach and makes a wide offer of 308 subjects, has 60 academic programmes and the courses are interdisciplinary. Symbiosis International University, Pune, offers a Foundation Course for all freshers.

Comparatively, in spite of government funding the universities located in the rural areas like Vidarbha, Marathwada tend to lag behind in research and publication of international benchmarks, what with paucity of funds, and the tendency of aspiring students to shift to urban institutions for further studies. Also, the performance is adversely affected due to inadequate staff recruitment for paucity of funds and sometimes on account of non-availability of qualified faculty. Many of them do not have a cafeteria approach with short value additions and enrichment courses with credit transfer facility, resulting in low clientele as students get these facilities in the urban universities. Irregular power supply and internet connectivity are also causes of slow advancement for these institutions. However, their outreach engagements are strong and commendable.

The universities for medical, engineering and technical education are monitored by the separate Bodies established for the purpose. Medical colleges, whether situated in rural or urban areas, are regularly assessed by the state and central Medical Councils and consequently have to keep upgrading themselves. However, many of the technical institutes have not gone in for the subsequent cycles of assessment even after a long-time gap. They are also understaffed.

Best Practices contribute to quality sustenance. The best performing universities (some of which are mentioned above) have state-of-the-art equipment, excellent faculty, international publications, wide choice of programmes, linkages with foreign institutions and local Industry, especially for expert counseling, apprenticeships and internships. Some of them have Registered Alumni Associations which are a substantial source of funding and expertise with representatives on Board of Studies (BoS) and Internal Quality Assurance Cell (IQAC).

The SNDT University has a good outreach engagement as its Best Practice.

Awareness about technological advancement and facilities for training for their use is much higher in the faculty of the urban universities, though the universities themselves do not necessarily make robust efforts to train the staff (which is a growing necessity). This





advantage is inherent in the urban location. This advantage gives an edge to these universities for information upgrade and better pedagogy. Their high ranking in NIRF is also a result of such location advantages.

### *Action Plan*

NB: The Action Plan along with recommendations for the universities is separately given in the 7<sup>th</sup> Chapter of this report. It contains critical observations, interpretations, expectations and directions emerging from the study of the Peer Team reports on institutional accreditation of Universities in the state.

### **5.2.2 Colleges**

Maharashtra is one of the progressive states of India where social reforms, education, and industry have laid solid economic and cultural foundation of the state. One of the three oldest universities of the country came into being in Mumbai in Maharashtra in the year 1857. Subsequently colleges were established in different districts. Many of them are century old institutions making great qualitative contribution to the progress and development of the state. They cover a very wide geographical area to include both urban and the rural, the hilly and the tribal belts of the state under the leadership of different universities which themselves have long and proud traditions.

As of today (May 2020), 1711 colleges out of total 4780 (AISHE, 2020) colleges have been accredited in Maharashtra. This report provides summary of findings and observations of PTs of 1367 accredited colleges in the State. They are catering to different educational requirements in different disciplines. The classification is as follows.

1. Government Colleges
2. Grant-in-aid Colleges
3. Self-financed Colleges

### *Criterion 1: Curricular Aspects*

A good number of colleges show awareness about planning the curriculum delivery with the help of an Academic Calendar to suit the larger University schedule. Many teachers participate in activities related to curriculum development and assessment of performance and represent on different bodies of the Universities like BoS, question papers setting panels, assessment and evaluation committees and panels. The Semester system has settled. Academic flexibility is struggling hard to grow under the affiliation system, while low faculty recruitment and other constraints are resulting in a slow change-over to CBCS system which is introduced partially in some colleges. Adequate confidence and understanding of value





additions and enrichment courses is yet to develop though it is an urgent need. Curricula directly addressing important issues like professional ethics, gender equity, environment protection and sustainability are not universally prepared on large scale though programmes focusing them are held in colleges. Even so, the Autonomous colleges are fast responding positively to the need and are introducing a good deal of flexibility in the curriculum giving it a cafeteria approach, which is recommended by several Peer Teams for all other colleges as well. Feedback mechanisms are in place in most colleges in various degrees and areas. A great number of PTs have observed that a structured and comprehensive feedback and its timely analysis with Action-Taken Report (ATR) are documented only in some colleges. Feedback from alumni and employers/recruiters is practically missing in most colleges. It is noteworthy that the recommendations made in the Peer Team Reports (PTRs) are carried out by most (if not all) colleges as post A & A requirement of compliance.

### *Criterion 2: Teaching-Learning and Evaluation*

Rules governing reservation of seats for the SC, ST, NT, OBC, Divyangjan categories are followed carefully in all aided as well as non-aided private colleges, including the minority institutions. In professional colleges admissions are through CET; some percentage of seats is under the Management quota. Admissions are merit based in the sought-after HEIs. In many colleges slow learners are identified through post-admission tests and additional help is extended through bridge and remedial courses. Teaching plans are prepared. Annual pass percentage in general is good. Peer Teams have pointed out high dropout in a few colleges. Similarly, in many colleges advanced learners are also given special additional coaching for higher performance. Most colleges claim to follow student centric pedagogy, participatory and experiential learning and teachers make use of ICT, mainly through Power Point Presentation and sometimes screening of films. Mentoring is done in batches, considering the uneven student-teacher ratio. Average percentage of fulltime teachers against sanctioned posts is very low in most cases. Almost fifty percent fulltime positions are vacant, and the number is increasing due to non-recruitment policy of the state government. Colleges and their sponsoring bodies find it difficult to organize the required finances for the sake of fulltime appointments to these vacancies. In most cases visiting or contractual or Part Time appointments are made. Less than 50% faculty members have Ph.D and higher degrees. In most colleges the Semester system is operative. Examinations are held by the universities. Grievance redress committees are in place in most colleges. Average pass percentage is above 80% and the dropout rate is marginal (barring a few colleges where it is noted to be up to 30%.) In only some colleges POs, PSOs, COs are identified in detail and stated.





### ***Criterion 3: Research, Innovation and Extension***

Almost all Peer Teams have recommended enhancing research activity in colleges. Dependence on government (UGC) for grants for research is a general expectation of colleges while grants and endowments from non-government agencies are marginal. There are small numbers of teachers recognized as Research Guides by their universities. (In some universities, however, college teachers are not given recognition as Research Guides or they cannot become BoS members.) Research projects in the form of MRP under UGC are undertaken by teachers in some colleges. A few universities earmark grants / Seed Money for MRP for college teachers also. Only a handful of colleges have this facility of Seed Money. Barely 50% of teachers have research degrees like Ph.D or M.Phil, though the registration is on the rise now. The advantage should devolve down to the students as potential researchers. Most colleges have constituted Research Committees and many of them conduct research methodology seminars including IPR provisions for teachers and PG students. Research publications are undertaken in many colleges though most of them do not appear in the international journals and the citation index. Most of them are published in journals outside the UGC CARE list. Colleges with science faculty seem to be acquiring patents in a small number. Innovations are essentially break through inventions and few and far between to come from colleges as only very few of them have started setting up ecosystem for innovations like a state-of-the-art Incubation Centre for start-up grooming. As for extension activities, most colleges take very active interest in them through the NSS Units by holding week-long camps and have villages adopted for outreach assignments. A few colleges and NSS Programme Officers (POs) have received state and university level awards for good outreach activities which include national programmes like Swachha Bharat, Tree Planting, AIDS Awareness, eradication of superstition and so on. This is also done through tie up with NGOs, local Panchayats.

### ***Criterion 4: Infrastructure and Learning Resources***

Maharashtra has a large number of colleges spread all over the state, covering both the urban and the rural areas. More than 50% of them have very spacious campuses with adequate physical facilities, including hostels. A very few old colleges have even heritage buildings to be proud of. Infrastructural facilities are slowly on the increase though not uniformly, as many colleges are unaided and managed by private managements without abundant resources. Therefore, the percentage of equipment like smart boards, WiFi enabled campuses, LMS, MIS is available in mostly the urban colleges. Libraries are the brains of educational institutions and expected to be incremental and updated in knowledge and information resources. Many old colleges have excellent libraries with a collection of old valuable books and journals. Stacking is a matter of concern for many old institutions now.





Around 50% libraries have ILMS, INFLIBNET, and e-journal availability, more so in the urban colleges. In many cases the librarians make efforts to attract students to the library by organizing various activities and offering facilities. Maintenance of campus and infrastructure is in most cases contractual as and when needed. Maintenance funds are allocated in the annual budget in a few institutions. Systems and procedures for maintenance are laid down in only a few colleges.

#### ***Criterion 5: Student Support and Progression***

All colleges provide scholarships, and other fee concessions recommended by the government, while many make the provisions from their own resources. In many colleges Poor Boys' Fund is constituted. Many colleges have a Book Bank scheme for the disadvantaged learners. In some college's scholarships for various subjects or general performance are instituted by philanthropic institutions as well as individuals to commemorate kith and kin. All colleges show some awareness about giving courses and training in soft skills, English language competency (through Language Lab in many cases), health and hygiene awareness and computer education and in some cases through national drives like "Yoga Day", etc. Most colleges have constituted (i) Grievance Redress Cell (ii) Cell for Prevention of Sexual Harassment (iii) Anti-Ragging Committee. Participation in cultural activities is vibrant though state/national level achievements are limited. Ordinarily sports facilities are available though the participation of students, especially girls, is limited. National level and even beyond achievements in sports are on record in a few colleges. Placement activity is, in general, limited to a few colleges located in urban areas. Normally student progression to higher courses seems much higher in urban HEIs than their counterparts in the rural areas. The dropout rate on the whole is marginal, though in a small number of colleges it is alarmingly as high as 30%, and in girls it is even higher. Also, though in a small number of cases the personal needs facilities for men and women need considerable improvement. Documentation about students' progression to higher courses is irregular, even not maintained in many colleges. Coaching for competitive and other qualifying examinations such as NET, SET, SLET, TOEFEL etc., is done in only a few colleges. Alumni Associations are a recent addition in a large number of colleges but in many cases, they are not registered and not fully functional.

#### ***Criterion 6: Governance, Leadership and Management***

Most colleges display their Vision and Mission Statements prominently and claim that the curricula and courses are in consonance with the Vision and Mission. In a number of cases the Vision Statement is not formed succinctly; also, the Mission Statements are not worded correctly due to inadequate understanding of the concepts. Formation of various Bodies (Governing Council, LMC), Cells and Committees are in place in most colleges in order to





decentralize the administration and decision making. They also help to channel the daily activities regularly. Various welfare schemes both for staff and students are extended. Conference, seminar activity is upbeat in most colleges. NAAC, UGC and University support has been very encouraging in this respect. Teachers are encouraged to attend and organize conferences, seminars with financial support. Participation/delegation to Refresher and Orientation programmes is also supported by most colleges. Structured teacher performance appraisal system is in place in almost all colleges. Students are co-opted in a few committees (though there are no elected Students Councils as a state policy). An expertly cast Strategic / Perspective Plan is not in place in a large number of colleges as the concept is not clear and expertise is not sought for drafting it. The concept (and practice) of e-Governance is in place in only a limited number of colleges. Setting up of MIS is in place in a very limited number of colleges, mostly urban, understandably due to the prohibitive costs and also unsatisfactory performance of the system. Annual Internal as well as External financial Audit is an established practice in all aided colleges. However, a regular External annual Academic Audit is not an established practice with most colleges. An important Body constituted in all colleges especially as a post-Accreditation compliance is the IQAC as per the structure recommended by the NAAC with some flexibility of cooption of members.

#### ***Criterion 7: Institutional Values and Best Practices***

The 7<sup>th</sup> Criterion of the NAAC instrument of assessment rightly brings under full focus the social orientation of education through institutional values, Institutional Social Responsibility (ISR) and Healthy / Best Practices. Almost all colleges have shown remarkable awareness about addressing socially important issues like Gender Equity and safety (with CCTV cameras) and community outreach engagements. The number of intake of girls is increasing and various programmes of awareness creation are an important feature of the academic calendar. In many institutions the teaching and the non-teaching staff include a reasonably increased number of women. An increased awareness about conservation of various resources is also observed in the programmes of most colleges. In a small number of colleges solar panels, LED lights, central switch boards are used. Water harvesting is also attended in many colleges. Several colleges have well-kept gardens and greenery with botanical gardens in some of the science colleges. A few colleges conduct a Green Audit with the help of external expertise. Quality audits of environment and energy conservation is a practice yet to settle in most of the colleges. Important values like tolerance, secularism, appreciation, acceptance and respect for diversity are highlighted in most colleges through various appropriate cultural events and programmes throughout the year. Many institutions are yet to develop an elaborate (stated) code of conduct and professional ethics for staff and students and disseminate it widely. Almost all colleges (especially post-accreditation ones)





have started identifying their Best Practices, of which there are many practices which has been developed over the years and in the light of the institutional Vision and Mission. The concept of “situatedness” lacks clarity in many colleges.

### **Overall Observations:**

It is to be noted that the rural-urban divide is obvious in the performance of colleges located in such areas. Though the colleges in rural areas are catering to the basic needs of higher education of the regional and local communities, their financial and similar constraints stunt their growth and performance. Faculty paucity and non-availability of qualified teachers is a common ailment with them. Although many of these rural colleges are run on grant-in-aid basis, non-recruitment of new required staff is a hurdle in quality maintenance.

The introduction of CBCS, value additions and enrichment programmes, is slow in rural institutions as more faculty is required for which there are no resources with the non-aided institutions. Teacher training for efficient use of educational technology is yet to pick up uniformly in most rural colleges.

Those universities which do not have a provision of having college teachers in the BoS or as Research Guides need to open their doors as this facility will enhance both the quality and quantity of research and also strengthen research culture at the college level. Most urban universities have this provision and the results are encouraging.

On the other side are the colleges located in the urban areas, especially like Mumbai, Pune, Nashik where traditions of learning and education are long and well-entrenched. Colleges like the Fergusson College, Pune, or the Patkar-Varde College, Mumbai, or the KTHM College in Nasik have resources like DST and FIST. Such colleges are fit cases for Autonomous status which they already have.

Birla College, Mumbai, has faculty with State and National level awards for contribution to NCC. Chembur College, Mumbai, has set up MIS.

Many colleges with PG centres especially enjoy high research output.

Thus, an all-sided high performance of the urban colleges has given them confidence to aspire for higher benchmarks and has also placed them in high slots of NIRF. For example, the Fergusson College, Pune, stands at number 42 in NIRF ranking. SP College, Modern College (both branches), BMCC, Pune, are also high performers with Autonomous status. Similarly, the St Xavier's College in Mumbai has a place within the first hundred ranks of NIRF. It also offers an updated course in Big Data. In the same high performing bracket are Narsi Monji College, Mithibai College, K. J. Somaiyya College, K. C. College, H.R. College, Parle College, Ruparel College, Ruia College, Shroff College, and many others in Mumbai. Most of them are Autonomous or are in the process of getting the status.





This is also one important reason why a good number of “A” Grade colleges in urban areas are expected to opt for Autonomy. It has to be noted that “A” Grade colleges in the hinterland District and smaller places in Maharashtra also have been performing well but not coming forward to obtain Autonomy. The reasons need to be investigated and help and guidance should be extended for uniform quality outcomes. Peer Teams have given recommendations to this effect for most “A” grade colleges in both urban and rural areas.

### *Action Plan*

NB: The Action Plan along with recommendations for the colleges is separately given in the 7<sup>th</sup> Chapter of this report. It contains critical observations, interpretations, expectations and directions emerging from the study of the Peer Team reports on institutional accreditation of Universities in the state. \*





## Chapter – 6

# Findings and Observations

### 6.1 Introduction

Based on quantitative and qualitative analysis carried out in the earlier chapters, some key findings and observations on the state and performance of accredited institutions in Maharashtra are presented in this chapter.

### 6.2 Findings from Quantitative Analysis

#### 6.2.1 Universities

1. As per UGC's latest data on Annual Survey of Higher Education Survey (web portal-AISHE 2020), there are 64 universities in Maharashtra. However, only 30 universities, consisting of 18 Deemed Universities, 11 State Public Universities and one Central University have valid NACC accreditation.
2. Only 46.88% of total universities in the State have valid accreditation. Among them, almost 85.71% deemed universities have valid accreditation as compared to 50% of total State public universities. State Private & Open Universities (12) and Institutes of National Importance (8) have completed remained out of accreditation process in the State as none of the institutions have applied for the accreditation.
3. In the total number of accredited universities, as many as 13 universities have received their first cycle of accreditation during 1999 to 2007 followed by 9 universities receiving it during 2009 to 2012 and 8 universities in 2015 to 2017. Among these, State public universities participated in large numbers in the first phase of accreditation, whereas deemed universities have come forward in great numbers in the second phase of accreditation,
4. Almost 90% of total accredited universities are located in the urban and semi-urban areas of the State. These are largely concentrated in Pune, Mumbai, Nagpur, Kolhapur and Wardha districts.
5. Deemed universities in general have performed better in all the seven criteria and overall performance scores (CGPA). Deemed universities shown significantly higher average scores and grades as compared to state public universities. The difference in their performance is largely attributed to a) better infrastructure & learning resources, b) curriculum aspects, and c) innovations and best practices.



6. Government and Government-aided Deemed universities, such as Tata Institute of Social Science, Mumbai, Institute of Chemical Technology, Mumbai and Tata Institute of Fundamental Research Mumbai ranked among the top three universities. Among the State public universities, Savitribai Phule Pune University ranked at 5<sup>th</sup> position.
7. The accredited universities with lower CGPA scores show poor performance in- a) Research, Innovation and Extension, b) Infrastructure & Learning Resources, c) Institutional Values and Best Practices and d) Governance, Leadership & management.
8. The co-efficient of variation for all the criteria and overall performance for the state public universities and deemed universities as well as all the accredited universities in the state observed within reasonable level (8% to 19% their group mean).
9. The accredited universities in the State have shown a remarkable performance in scaling up their average CGPA scores (4.97%) and bringing down variability (-39.75%) in performance during the last two phases of accreditation. In fact, the performance of state public universities is quite notable (8.64%) as compared to deemed universities (3.87%).

### 6.2.2 Colleges

1. There are 4780 affiliated and 2392 Standalone colleges in Maharashtra (AISHE, 2020). Out of these, 1711 colleges have been accredited so far as on 31st May 2020. The study uses a sample of 1367 accredited colleges for the qualitative and quantitative analysis.
2. Almost 42.7% (584 out of 1367) of total accredited colleges are affiliated to Savitribai Phule Pune University and University of Mumbai in the State. Moreover, these universities also form significant proportions of accredited colleges with constituents (38.5%), autonomous (60.5%) and minority (61.7%) status. University of Mumbai, however, tops among all the universities affiliated colleges with autonomous and minority status.
3. About 43.9% of total accredited colleges are located in urban areas followed by 40.82% in rural and 12.36% in semi-urban areas. Only small fraction of the accredited colleges (2.93%) are located in the tribal areas. The distribution of colleges in Maharashtra, in fact, remain sheavily lopsided towards urban areas and select districts. The top 10 districts accounted for nearly 60% of the total accredited colleges. Amravati, Aurangabad, Nagpur and Nashik divisions have relatively higher proportions of the colleges in rural areas. The districts with higher concentration of tribal population show a significant presence of tribal accredited colleges.



4. The private accredited colleges constitute a big chunk of (98.3%) of the total accredited colleges in the State, and almost 59.5% of them receive grant-in-aid from the State & Central Governments and remaining 38.8% are fully self-financed colleges. A little less than two third of the grant-in-aid (government-aided) accredited colleges completely depend upon government funding, whereas the remaining colleges have notable taken some steps by initiating self-financed courses to cater the growing demand for professional courses. Most of the totally self-financing (private un-aided) accredited colleges are concentrated in Pune and Konkan divisions; whereas, government-aided colleges in Aurangabad and Amaravati, Nagpur & Nashik divisions.
5. There are 87 Women colleges with a valid NAAC accreditation in Maharashtra, accounting for 6.36% of total accredited colleges. Most of these colleges are concentrated in Pune, Mumbai and Nagpur districts (47.1%) followed by Beed, Amravati, Thane, Jalgaon and Kolhapur (20%) districts.
6. Around 63.57% of the total accredited colleges in the State offers both UG and PG programmes followed by 29.55% colleges offering UG programmes only. Only 6.88% of total accredited colleges offers PG programmes only. The four districts namely, Pune, Mumbai, Nashik and Nagpur constitute 41% of total accredited colleges offering both UG and PG programmes. These districts have also higher concentration of accredited colleges offering PG only programmes (75.5%) and UG only programmes (28.2%).
7. Almost two third of the total accredited colleges in Maharashtra offer general education programmes with some professional courses, followed by the colleges offering engineering & technology (17%), management (7%), education (5%) and medical & allied (3%) programmes. A significant proportion of these colleges is concentrated in Pune, Mumbai, Nagpur and Nashik followed by Kolhapur, Thane and Aurangabad. The accredited colleges offering social work programmes are largely concentrated in regions with a significant tribal population such as Nagpur, Jalgaon, Chandrapur, Bhandara, Gadchiroli, Dhule Nandurbar, and Amaravati districts.
8. Almost half of total accredited colleges selected for the study have received accreditation in the recent period (2013 to 2020). The number of accredited colleges during first and latest phase of accreditation grew from merely 263 to 1367. The accredited colleges show marked variation in their overall performance scores across the phases of accreditation. The colleges with extended period of association in the



- accreditation process show relatively better performance than their counterparts, indicating the positive impact of accreditation on their performance level.
9. On an average, the accredited colleges in the State show better performance in the areas of a) infrastructure, and learning resources, b) teaching-learning and evaluation and c) curricular aspects. Whereas, their performance in e) student support and progression, f) governance, leadership and management, and g) innovations and best practices is below the State average performance (CGPAs). The performance in research, innovation and extension found to be at average level.
  10. The average performance (CGPA) scores of the accredited colleges affiliated to the universities located in Jalgaon, Solapur, Vidarbha (Amravati, Nagpur and Gadchiroli) and Marathwada (Aurangabad and Nanded) districts observed to well below the state averages and needs special attention to improve their scores.
  11. The location of accredited college has a significant influence on the performance scores of accredited colleges in Maharashtra. For all the evaluation criteria and overall performance indicator (CGPA), the accredited colleges located in urban areas have reported higher average scores than those colleges in rural areas. 'Student's 't' test and two-way ANOVA test show statistically significant difference in the mean values of seven evaluation criteria scores and CGPAs between the two location colleges.
  12. The test results also clearly demonstrate limited role of source of funding in influencing the overall performance scores. The average CGPA scores between the accredited colleges receiving grant-in-aid from the State and totally self-financed (private-unaided) colleges were not much different in the case of Maharashtra. The source of funding, however, make significant difference in the performance of a) curricular aspects, b) teaching -learning and evaluation, c) research innovation and extension, d) infrastructure and learning resources, and e) governance, leadership and management. Student's 't' test and two-way ANOVA (except b) show statistically significant results in the estimated marginal means of the above mentioned criteria scores between the two sources of funding.
  13. Government and Government-aided accredited colleges in particular have shown a significant better performance in the areas of b) teaching-learning and evaluation, c) research, innovation, and extension, and e) governance, leadership and management; whereas self-financed accredited colleges in a) curricular aspects, and d) infrastructure and learning resources. The performance of both the types of accredited colleges in i) student support and progression and ii) innovation and best



practices, have remained more or less similar to each other. The observed difference in their mean scores of these were not statistically significant enough to reject the null hypothesis.

14. The interaction effect of location and source of funding have a significant influence on the performance of the accredited colleges in the State in seven evaluation criteria and the overall performance (CGPA) scores. The accredited colleges, whether Govt., Govt.-aided or Self-financed, located in urban areas have performed significantly better in terms of performance scores than those located in rural areas for all the evaluation criteria.
15. The type of college, whether 'Co-education or women', does not have bearing on their performance level. Student's 't' test found to be statistically insignificant for all the evaluation criteria and overall performance (CGPA) scores, clearly demonstrating average performance of accredited colleges remaining more or less same across co-education or women colleges for all the evaluation criteria and CGPAs.
16. The accredited colleges with minority and autonomous status shown better performance as compared to general (no special status) colleges. The means of minority and autonomous accredited colleges were significantly higher than those of general colleges for all the evaluation criteria and overall performance (CGPA) indicator.
17. The chi-square tests of independence were carried out to assess whether the distribution of grades vary across the categorical variables such as location, sources of funding, type of colleges (co-education and women) and programmes offered (general, engineering, management etc). The results of the test shown significant difference in the distribution of grades between rural, urban, semi-urban and tribal locations; sources of funding (between government, government aided and self-financed colleges); type of programmes/courses run by accredited colleges (general, law, engineering & technology, management, etc). As far as connection between distribution of grades across type (co-education and women) of accredited colleges is concerned, the results did not show any significant difference.

### 6.3 Observations from Qualitative Analysis

The peer team reports contain a lot of information about the actual realities as seen by the peer team at the ground level. The qualitative findings can be subjective but nevertheless, when read in between the lines, they offer some insights about the ground realities and suggests future course of action. In this spirit, qualitative findings based on peer team reports have been provided in the following sections.



### 6.3.1 Universities

**Criterion 1: Curricular Aspects:** Among the key lacunas observed by the peer teams in curricular aspects included concerns of employability of youths coming from university education due to non-alignment of university courses with market and industry needs, weak interface between universities and industry and poor engagement with foreign universities. These concerns need to be addressed by reviewing and strengthening of courses by surveying and identifying the market and employer needs, increasing the participation of members from industries in Board of Studies and IQAC and increasing tie up with foreign universities with additional financial support. Periodic revision of the curricula and strict implementation need special attention. The introduction of the CBCS is still slow and with limited choice of subjects.

**Criterion 2: Teaching-Learning and Evaluation:** Some of the high performing universities in the State follow strict merit-based admissions approach, have more autonomous departments, and attract bright students from all over India as well as from international students. For example, universities such as Tata Institute of Social Sciences, Mumbai, Symbiosis International University, Pune, D. Y. Patil Deemed Universities (Mumbai & Pune), Deccan College Post-Graduate and Research Institute, Pune, The Homi Bhabha Institute, Mumbai, Savitribai Phule Pune University (SPPU), have a noticeable number of students from all India as well other countries and have excellent student-teacher ratios. Most of these universities have introduced new subjects under multi-disciplinary system. For example, D. Y. Patil Deemed University, Mumbai, has a cafeteria approach and makes a wide offer of 308 subjects, has 60 academic programmes and the courses are interdisciplinary.

Peer Teams have observed significant improvement in awareness about research and increase in strength of faculty members with M.Phil and Ph.D degrees across universities. A few universities have started engaging with international experts for academic interaction with faculty staff and students. But the efforts on the accounts are still beyond satisfactory level. Moreover, inadequate training facilities, underutilisation of existing modern technology in administrative and academic day-to-day functioning, slow adoption of ICT in training, learning and evaluation by faculty and staffs and lack of coherence between mentoring needs and systems in place in many universities are still major concerns. Some of these issues, however, could be dealt with strengthening of LMS and MIS with regular training for the faculty and the non-teaching staff for effective use of ICT technologies, structuring of teaching, learning and evaluation systems and increasing participation of experts.

**Criterion 3: Research, Innovation and Extension:** Peer Teams have found a significant improvement in funding from industry, philanthropic institutions and individuals, Alumni, UGC under RUSA, and universities allocating Seed Money/grants for conducting



Minor/Major Research Projects (MRP). Some of the Deemed universities such as Indira Gandhi Institute in Mumbai, funded by the Reserve Bank of India (RBI) and Gokhale Institute of Politics and Economics, Pune are equally strong in teaching, research and publications. These universities have been able to generate funds from national as well international agencies through research projects and innovation and also command 100% placement for their students. In the view of competition from Deemed Universities, the State Public Universities in the State have become more sensitive towards enhancing and strengthening their research quotient. Some of the universities, for example, Savitribai Phule Pune University (SPPU), Pune, and University of Mumbai have set up an Incubation Centre for Start-up grooming, Research Committees/Centres, UGC CARE centre and provide seed money for minor research projects even to the college teachers in the affiliated colleges. These have also taken initiatives for continuous strengthening of IQACs for quality enhancement, sustenance and to boost research culture. Innovative research, however, is yet to take a root and need lots of training, exposure, and financial, administrative and infrastructural support.

**Criterion 4: Infrastructure and Learning Resources:** The universities in the State have done commendable progress in raising infrastructure and learning resources. Most of universities have sufficient number of classrooms, laboratories, library, support services like canteen, health centre, residential facilities, sports and cultural activities. In addition to these, universities also have started extension of departmental libraries, INFLIBNET, and other online sources for academic retrieval, online courses and counselling and raising investment in technology network and online connectivity with colleges for effective of management of admissions and examinations. Many universities have sufficient land available to expand and enhance infrastructure. Some of the Universities, however, face crunch of resource for campus upkeep, security and beautification.

**Criterion 5: Student Support and Progression:** Peer teams observed 'Grievance Redressal, Anti-ragging and Prevention of Sexual Harassment Cells', 'Health Centres' and 'Foreign Students Centres' are well placed and functional across the universities in the State. Some universities also provide training facilities for state and national level competitive civil services examinations (MPSC/UPSC) and initiatives for employment avenue by inviting industry for campus recruitments. The passing percentage rate is maintained at high level (even above 90%) in all universities. Most universities, however, were not observed to be keeping track of student progression after students pass out, resulting in a weak Alumni activity. In many cases the Alumni Associations are not registered. Elections to Students Councils have been banned in the state, though students are involved in some council meetings for their representation and feedback.





**Criterion 6: Governance, Leadership and Management:** Governance in most universities is observed to be well-structured and Vision and Mission statements properly and prominently highlighted. Most of the universities have adopted have representation from faculty and personnel in various bodies such as Executive Council, Academic Council, Senate, Finance Committee, IQAC, BoS, NSS. In a few universities the activity of mentoring (cluster) colleges for NAAC preparation has taken off under the flagship scheme *Paramarsha* of the UGC. Faculty is encouraged to participate in national, international conferences, seminars, symposia with financial support and leave facilities as a measure of quality sustenance. Some of the key issues in governance and management not yet much attended included absence of MIS and training of staffs, lack of record keeping and data Bank and poor monitoring of annual Academic, Administrative Audit (AAA) of affiliated colleges and HEIs.

The universities for medical, engineering and technical education are monitored by the separate Bodies established for the purpose. Medical colleges, whether situated in rural or urban areas are regularly assessed by the State and Central Medical Councils and consequently have to keep upgrading themselves. However, many of the technical institutes have not gone in for the subsequent Cycles of assessment even after a long-time gap. They are also understaffed.

**Criterion 7: Institutional Values and Best Practices:** All universities in the State have identified several best practices and are following them. However, a meticulous analysis is missing to assess gaps between the actual and desired outcomes.

**Overall Performance:** The universities located in the urban region especially Mumbai, Pune and Nagpur and receiving government and UGC funding outshine those without these resources in the rural ones. The access to highly technological savvy staffs and students, and spill-over effects of institutions providing different skill sets during the early education are some of the advantages that give an edge to these universities for information upgrade and better pedagogy. Their high ranking in NIRF is also a result of such locational advantages.

The State Public Universities located in the backward regions such as Jalgaon, Vidarbha, Marathwada in general are lagged behind in research and publication due to paucity of funds, and inadequate staff recruitment and sometimes on account of non-availability of qualified faculty. These universities also often fail to get bright and aspiring students due to migration of students from the regions to well-recognised institutions in other places of the State. Many of them do not have a cafeteria approach with short value additions and enrichment courses with credit transfer facility. Irregular power supply and internet connectivity are also causing of slow advancement for these institutions. However, their outreach engagements are strong and commendable.





Universities with autonomous departments, offer varieties of courses or subjects in demands, attract a good number of students from all over the country and international students through merit base admission process, maintain better teacher student ratios, strengthen teaching and research infrastructure and promote research culture by raising funds from projects and national and international agencies. Deemed Universities in this regard outperform as compared to State Public Universities in the State in almost all evaluation criteria. Best practices also contribute significantly in their high-quality standards. The best performing universities have state-of-the-art equipment, excellent faculty, international publications, wide choice of programmes, linkages with foreign institutions and local Industry, especially for expert counselling, apprenticeships and internships. Some of them have Registered Alumni Associations which are a substantial source of funding and expertise with representatives on Board of Studies (BoS) and Internal Quality Assurance Cell (IQAC)

### 6.3.2 Colleges

**Criterion 1: Curricular Aspects:** The participation of teachers in activities related to curriculum development and assessment of performance and representation on different bodies of the Universities like BoS, question papers setting panels, assessment and evaluation committees and panels was quite encouraging in the State. Feedback mechanisms are in place in most colleges in various degrees and the recommendations made in the Peer Team Reports (PTRs) are carried out by most (if not all) colleges. Academic flexibility is still major constraints under the affiliation system. The system is observed to be quite slow in its response for bringing in urgent changes or developing new courses on emerging issues like professional ethics, gender equity, environment protection and sustainability, confidence, and value additions, health and nutrition. The Autonomous colleges in the State, however, have shown much better way to adapt to the need and a great deal of flexibility in the curriculum development. Feedback from alumni and employers/recruiters is practically missing in most colleges and a structured and comprehensive feedback and its timely analysis with Action-Taken Report (ATR) are documented only in some colleges.

**Criterion 2: Teaching-Learning and Evaluation:** Most colleges in the State have followed student centric pedagogy, and adopted participatory and experiential learning approaches. Teaching plans are regularly prepared and annual pass percentage in general is good. Almost 50% of the faculty members have Ph.D and higher degrees. Many colleges provide special coaching and mentoring for higher performance. Among the major issues observed included low percentage of fulltime teachers against sanctioned posts and undue reliance of visiting and contractual faculties. The issue is quite serious in case of private colleges and Govt.-aided colleges finding difficult to organize the required finances to make fulltime appointments.





**Criterion 3: Research, Innovation and Extension:** The colleges in the state show higher dependence on government (UGC) for research grants. A few universities have earmarked grants / Seed Money for Major and & Minor Projects, but handful faculty were able to access it. The proportion of teachers as Research Guides is still small and some cases very negligible. Most colleges have constituted Research Committees and conduct research methodology seminars. Research publications are encouraged by many colleges though most of them are published in journals outside the UGC CARE list. Colleges with science faculty seem to be acquiring patents in a small number. In extension activities, most colleges have taken active interest through the NSS Units by holding week-long camps and conducting outreach activities in adopted villages through tie up with NGOs, local *Panchayats*.

**Criterion 4: Infrastructure and Learning Resources:** More than 50% of the accredited colleges in the State have very spacious campuses with adequate physical facilities, including hostels. Infrastructural facilities have improved slowly but not uniformly across the colleges. The colleges located in rural areas especially self-financed colleges have faced serious challenges in raising resources for the infrastructural activities. The infrastructural facilities like smart boards, Wifi enabled campuses, LMS, MIS are mostly found in the urban colleges. Many old colleges have excellent libraries with a collection of old valuable books and journals. Stacking is a matter of concern for many old institutions now. Around 50% libraries have ILMS, INFLIBNET, and e-journal availability, more so in the urban colleges. Maintenance of campus and infrastructure is in most cases contractual as and when needed.

**Criterion 5: Student Support and Progression:** The colleges in Maharashtra in general have shown significant awareness and interest in providing courses and training in soft skills, English language competency, health and hygiene awareness and computer education. Most colleges have constituted (i) Grievance Redress Cell (ii) Cell for Prevention of Sexual Harassment (iii) Anti-Ragging Committee. Participation in cultural activities is vibrant. However, the participation of students, especially girls, is limited. Placement activity in general, was limited to a few colleges located in urban areas. The dropout rate on the whole is marginal, but alarmingly (30%) in few colleges especially that for the girls in rural and semi-urban areas. The health and hygiene facilities for students, however, need considerable improvement. Documentation about students' progression to higher courses is irregular and not maintained in many colleges. Coaching for competitive and other qualifying examinations such as NET, SET, SLET, TOEFEL etc., is done in only a few colleges. In only some colleges POs, PSOs, COs are identified in detail and stated.

**Criterion 6: Governance, Leadership and Management:** Most colleges display their Vision and Mission Statements prominently, but still need significant revision in framing them succinctly or wording it correctly. Most of the colleges have formed various Bodies





(Governing Council, LMC), Cells and Committees and extended various welfare schemes both for staff and students. Teachers are encouraged to attend and organize conferences, seminars and refresher and orientation programmes with financial support. Structured teacher performance appraisal system is in place in almost all colleges. Among the major issues observed by the Peer Teams included absence of Strategic / Perspective Plan and negligence of e-Governance and MIS based practices mostly in rural areas. The Government aided colleges have Annual Internal and External Financial Audit system in place, but it was not found in the case of un-aided colleges.

**Criterion 7: Institutional Values and Best Practices:** Almost all colleges have shown remarkable awareness about socially relevant issues like Gender Equity and safety (with CCTV cameras) and community outreach engagements. There has been a significant increase in intake of girls' students and women faculty staff across the colleges in Maharashtra. The colleges across the State were found to organise awareness programmes on sustainable use of resources and environmental conservation. These included water harvesting, tree plantation and green auditing; and energy conservation through use of solar bulbs. Important values like tolerance, secularism, appreciation, acceptance and respect for diversity are highlighted in most colleges through various appropriate cultural events and programmes throughout the year. Most of them, however, are yet to develop an elaborate code of conduct and professional ethics for staff and students and disseminate it widely. Almost all colleges (especially post-accreditation ones) have started identifying their best practices developed in the light of the institutional Vision and Mission.

**Overall Performance:** Location of the colleges, their funding status and autonomy play a significant role in the performance of colleges in Maharashtra. The colleges located in urban areas, particularly Mumbai, Pune, Nashik and Nagpur do outshine in the performance as compared to the colleges located in rural or backward regions of Marathwada, Vidarbha, and Tribal regions of Nashik, Jalgoan, and Amaravati. Though the colleges in these areas are catering to the basic needs of higher education of the regional and local communities, their financial and technical constraints have stunted their growth and performance. The paucity of funds, lack of well-trained faculty & staffs, non-recruitment of required staff, slow progress in adoption of CBCS, value additions and enrichment programmes are major hurdle in quality maintenance. The training and promotion of technology and efficient handling of equipment are yet to pick up uniformly in most rural colleges.

Those universities which do not have a provision of having college teachers in the BoS or as Research Guides need to open their doors as this facility will enhance both the quality and quantity of research and also strengthen research culture at the college level. Most urban universities have this provision and the results are encouraging.





The colleges located in the urban areas, especially like Mumbai and Pune have natural advantages due to existing traditions and infrastructure for learning and education. Many colleges with PG centres in these regions enjoy high research output. Some of the colleges such as Fergusson College, Pune, Parkar-Varde College, Mumbai, Chembur College, Mumbai have resources like DST, MIS and FIST. The overall high performance has boosted the confidence of the colleges in urban areas to aspire for higher benchmarks and compete not only within state, but nationally for higher ranking. The number of “A” Grade colleges in the urban areas are largely inclined to opt for autonomy.





## Chapter – 7

# Future Perspectives and Recommendations

## 7.1 Universities

### 7.1.1 Introduction

The present year (2020) is the Diamond Jubilee Foundation year of the progressive state of Maharashtra. The present consolidation report coincides with the anniversary. The State is a mine of such gems and diamonds as *Lokmanya* Baal Gangadhar Tilak, *Maharshi* Dhondo Keshav Karve, *Mahatma* Jyotiba Phule and his wife *Krantijyoti* Savitribai Phule, *Vishwaratna* Dr Babasaheb Ambedkar, *Karmaveer* Bhaurao Patil, to mention only a few of them. Today's Maharashtra is a precious legacy of such great minds. Being a progressive state with great traditions in education, culture, social reforms and nation building, Maharashtra has shown great voluntary acceptance of the Assessment and Accreditation process of the NAAC. A large number of universities and colleges have repeatedly undergone the exercise and are striving to upgrade themselves in the light of the suggestions given by the Peer Teams. Consequently, Maharashtra is one of the few states where the highest number of HEIs have voluntarily been assessed and graded. One notable result is the growing number of eligible colleges for the Autonomous status. An increasing number of Universities and HEIs are preparing to undergo the NIRF exercise also for the same reason.

Universities are the custodians of the healthy and happy future of humanity. They have a crucial hegemonic role to play in the grooming of the young in multiple ways, such as academic, ethical, physical, mental health and hygiene, civic sense, inculcation of respect for secular and democratic traditions and values. Universities are wellsprings of these virtues with excellence as the supreme desired outcome (which is also the stated Core Value of NAAC). The health and progress of a nation is securely founded on the quality of the universities it has established and groomed. India has almost 1,000 universities and counting, which is a healthy and encouraging sign of sustainable development. Maharashtra has totally-64 universities of different descriptions and they are deeply involved in the process of nation building in various degrees, since an educated and enlightened citizenry is an impactful human resource of a nation. It is noteworthy that in some universities the students and the staff include more women than men. There are some universities that have acquired Potential for Excellence status, and some others that claim international acknowledgement of excellence (like the Indira Gandhi Institute, Mumbai, for instance) where prestigious projects





from Bill and Melinda Gates Foundation are underway. A few universities (like Mumbai University and SP Pune University) have international twinning and collaboration linkages. It is commendable that with every next Cycle of A & A, universities are in a receptive mood to accept recommendations and introduce changes accordingly, resulting in incremental improvement.

While this positive aspect is creditable for the state, there are a few gray areas that need urgent attention and sustained efforts for quality elevation in view of the expectations and benchmarks established by the universities in the developed countries. In science specialist institutions and departments a lab-to-land orientation needs boost. Universities are expected to aggressively address various social problems and suggest suitable solutions and remedies. It is not that the powers that be are not aware of this lacuna. Indeed, the New Education Policy draft (2019) is an ambitious but encouraging document that lays down a definite project plan with guidelines for an all-sided advancement of education in the country including higher education. Its extra emphasis on strengthening research facilities is prominent.

One result-oriented way of benchmark elevation is the process of Assessment and Accreditation robustly undertaken by the NAAC that has always kept itself with the contemporary global developments in Higher Education and is engaged full-scale in the amelioration of the entire process. The positive results are slowly showing and need to be emulated by other institutions.

### 7.1.2 Prelude

The present Report, focusing on the status and functioning of the universities in Maharashtra, is an extensive exercise in awareness creation by consolidating and disseminating the findings of the various Peer Teams that have assessed these universities and have also given useful recommendations for change and quality assurance and improvement. The present report covers 30 universities in the state of Maharashtra which have undergone the various Cycles of the A & A process. In addition to being a mirror held to the assessed institutions, the Report can also act as a booster for those universities that have yet to undergo this process. The ultimate objective of these efforts is to provide an enlightened, active and creative citizenry to the nation and the world. Therefore, the Report includes revealing observations and suggestions that can go a long way in guiding the universities as well as encouraging the un-assessed ones to volunteer for fortifying the quality creation and sustenance process in their campuses through the A & A exercise of the NAAC.

One has to bring it on record that on the whole, despite certain uneven performance among all the universities, **the general picture that visibly emerges is one of vibrant, change-friendly and quality conscious organizational culture and institutional life where long and worthy**





**traditions and painstakingly developed Best Practices support the creative efforts.** More than 50% universities are functioning in rural and semi-urban areas, reaching out to a large community of higher education aspirants. The will to improve is dominant. New leadership is trying to introduce new ideas while the experienced faculty is in a mood to guide and help the efforts, both leading to useful service to society and nation. In this respect the NAAC certainly has been playing a constructive role and has acted as a catalytic change-agent in the mission of amelioration and quality sustenance. With better physical facilities, better library facilities, better educational qualifications, better salaries, better gadgetry, state-of-the-art infrastructure and increased autonomy in the institutions, the society expects commensurate outcomes and the universities are robustly trying to answer the expectations.

Simultaneously, on the flop side are HEIs writhing and wriggling under certain threats and constraints. The visible gray areas are suffocation due to inadequate faculty force, inadequate, irregular and precarious grants and funding, meager resource generation, and an inconvenient disconnect with Industry and the corporate business world. Some universities seem to sag under the burden of hundreds of affiliated colleges and HEIs of various types, making governance unwieldy. Their sub-centres, established for decentralization, need strengthening.

Most Peer Teams have put emphasis on the education of science, technology and skills inculcation. It is certainly in the fitness of things. Science and technology have revolutionized our life by immensely improving it by catering to its physical needs. Comforts and conveniences, health and hygiene have phenomenally improved with the advancement of science and technology. Even so, they do not and cannot answer all human problems. Issues and needs of philosophical, spiritual, metaphysical, ethical, moral, aesthetic and civil nature transcend the boundaries of science and technology; and mere skilling is not education. These multiple inner needs of finer nature are supplied by liberal education, humanities and the arts. Therefore, it is crucial to emphasize the cultivation of these values, as the youth of today will compose the citizenry of tomorrow. They it is who will set the cultural standards and values of the future society. Hence, the singular need to safeguard and cultivate the study of humanities in our schools, colleges and universities. The New Education Policy (2019), therefore, rightly places emphasis on Liberal Education.

The recent Covid-19 pandemic has thrown the entire human systems in total disarray, making any predictions impossible as to what the new post-pandemic world will be like. Even so, it is writing on the wall that life will throw more, greater and ruthless challenges for which we all will have to brace ourselves. Institutions have to be mentally prepared for multiple emergencies like shoestring budgets, resource crunch, cash-strapped state due to





slow inflow of tuition fees, declining student enrolment and disrupted academic calendar. Tolerance, firm resolve and bold innovative problem solving thinking alone can bring relief. At this critical moment all that we can do is hope and pray in epic poet T. S. Eliot's words:

*And all shall be well and  
All manner of things shall be well*

### 7.1.3 NAAC Coverage: Action Plan Suggested

**With critical observations, interpretations, suggestions and directions for implementation.**

#### *Curricular Aspects*

The UGC expects curricular revision periodically and also at least 20% new inclusions in the existing syllabi every year. The slow response to curricular changes for updated inclusions can be managed through extensive surveys, advice and suggestions from Industry and the corporate world, enlightened stakeholders, Alumni, prominent citizens as also comparison with some high performing universities abroad in order to prepare industry-ready/job-ready candidates as well as those programmes catering to social, cultural and national needs. A large number of programmes in the nature of value additions, enrichment can be launched as Certificate, Diploma and short courses for inculcating transferable skills with credit points. A cafeteria / a la carte approach is desirable and Peer Teams have repeatedly recommended it. Care needs to be taken that all these programmes indirectly address the five Core Values recommended by the NAAC. This can also achieve the purpose of value education. A cross-cutting/interdisciplinary approach recommended by PTs is needed in curricular development in order to enhance the employability of the learners. The inclination of institutions is towards enrichment of science and technology courses and training. However, equally vehement promotion of Humanities and Liberal Education including language studies is also a need of the times. The National Education Policy 2020 underlines the importance of Liberal Education for this purpose. Several soft-skills needed in civil life and career situations emanate from humanities and liberal education. Technology-based knowledge systems like Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Data Science/Analytics, Robotics are the sunrise knowledge disciplines with strong employment potential. They need special attention of our Universities and HEIs.

#### **Teaching-Learning and Evaluation**

World trends in education clearly show that the future of education is online teaching-learning, preferred by the young learners in a growing degree. UGC's SWAYAM and the





universal popular MOOCs are examples in point. The current **webinar boom** is a shining indication of the direction in which the winds are blowing. Hundreds of thousands of students from India are studying online and off the campuses in the hybrid learning mode. In addition to the core courses offered by the universities, a large number of value added short courses should be offered with well defined credits. In order to achieve this objective intensive teacher training for e-content preparation as also techno-based pedagogy should be undertaken assertively on a large scale and as an ongoing activity. Evaluation needs to be credible and transparent, and the results have to be declared within the stipulated statutory period, as there are instances of mismanagement and breach of some of these norms, resulting in student unrest and career hindrances. **LMS** and **MIS** though installed in many cases, need strengthening with regular training for the faculty and the non-teaching staff for increased efficiency and ease. It will also help the faculties to transcend mere Power Point Presentation dependence. The low Citation value of research papers and publications indicates that publication and patenting on national as well as international levels need to be strengthened. Efforts are needed for sustained quality performance as fluctuations in NAAC, NIRF ratings of universities (and colleges) are observed in many cases.

### ***Research, Innovations and Extension***

Universities are especially responsible for knowledge creation through robust quality driven research and publication activity. In order to achieve this goal the faculty should be regularly and intensively trained for adhering to IPR rules and research writing discipline in order to create and sustain conducive research culture which is often absent in universities and colleges. International face-to-face exposure to innovative approaches is desirable. The great advantage of a research trained faculty is that it devolves down the research culture and discipline onto the students. Dependence on funding bodies like the UGC, the Government is likely to shrink (in post Covid19 situation) while resource generation will have to be tapped with other funding avenues like patents, NGOs, Industry, corporate houses, philanthropic institutions and individuals, Alumni and international agencies. All-out efforts and awareness are needed for quality sustenance which will elevate universities in the scroll of annual World Ranking of Universities where our presence is less than marginal, though *it does not mean that the quality of our institutions is low*. We need to understand the required methodologies and strategies for high placing. As for extension activities, the main channel being the NSS units, they should be firmly oriented to work to fetch tangible and sustainable outcomes, especially with reference to the national agenda contained in various Missions. Data analysis and Action Taken Report are not efficiently maintained to check on the tangible outcomes of the activities as well as their sustainability strength. They should also be





uploaded on the institutional websites for wider dissemination. Consultancy is an unfailing activity of resource generation but does not seem to generate substantial funds. In most cases Patents, if existing, do not bring in substantial sums for further research and development. Seed money for Major/Minor Research Projects (MRP) should be allocated for staff faculty as well as for college teachers. Some universities follow this as a Best Practice, which is a welcome boost for research efforts. Considering the various small and not so small problems faced by individuals and institutions, large scale **Action Research** can be encouraged for problem solving.

### ***Infrastructure and Learning Resources***

A carefully drafted **Perspective Plan / Vision Document** will have to be prepared to visualize future growth over the next ten years. This is not possible without identifying and analyzing the needs of the stakeholders through surveys and study / knowledge of the developments in educational institutions world over. The IQACs have a pivotal role to play in this activity. Preparing a Strategic Plan is, however, a rather demanding activity calling for expert advice. Experts from Industry and Management studies / discipline are useful for it. This will include the growth of both, the academic as well as the physical facilities and the infrastructural provisions to develop the campus into a real centre of excellence with state-of-the-art equipment such as an **Incubation Centre** for innovation and start-up grooming. A collaborative approach with other HEIs will have to be adopted in view of possible economic constraints in the post Covid19 scenario. Several universities have resorted to examinations related work through technology network, though serious glitches have occurred in some cases resulting in prolonged process of assessment and result declaration. This area needs urgent help and support. Phase-wise approach (allowing trial and error experimentation) will help to consolidate the system and minimize / eliminate glitches.

### ***Student Support and Progression***

Comprehensive counselling and mentoring services are a growing need of the young generation in the increasingly complex world. These facilities should be comprehensively inclusive of psychological, ethical, academic, health specific awareness, vocational and career development and placement guidance. This will achieve the goal of preparing the young with desired **Graduate/ Student Attributes** desired all over the world. There is a demand for job-ready, “finished” workforce in all fields of activity including social and cultural needs. The HEIs have a long way to go in this concern. This Criterion also harbours scope for a strong, functional and productive Alumni Association through tracking and data building. It is serious that instances of harassment are reported and in some cases girls have pointed out that necessary information about complaint Bodies (Prevention of Sexual Harassment Cell),





procedures and security is still not disseminated widely. A handful of universities have Centre/Department for Fine Arts (*Lalit Kala Kendra*), Film Studies, Lok Kala Academy and Theatre Arts, Music Department, for training in dramaturgy, Indian Classical Dance and Classical Music as also folk arts as a strong boost for Liberal Education and performing arts which have an expanding market offering considerable career opportunities in the Entertainment Industry and Television world. It should be mentioned here that in many Peer Team Reports, especially for colleges, suggestion/recommendation to this effect has appropriately appeared, as only a small number of colleges in the state have Fine Arts, Drama and Music Departments.

### ***Governance, Leadership and Management***

Quality sustenance depends on regular and detailed feedback analysis through various Audits such as Academic, Administrative, Financial, Gender, Green, Safety and so forth. These efforts can give useful guidelines through SWOC/SWOT and recommendations by expert assessors for error correction, if any, and quality improvement and enhancement. For this purpose the IQAC has to have extremely proactive and hard working visionary members who will design the Instrument of Assessment, identify experts, organize logistics, and eventually analyse the feedback for preparing a compliance report or an Action-Taken Report (**ATR**). It is a good practice to develop Standard Operating Procedures (**SOPs**) and Best Practices for the sake of zero-error, high quality performance in governance and management. University leadership extends to affiliated colleges and HEIs. Accordingly, the process of annual Academic and Administrative Audit (AAA) has to be set down and actual work with clear periodicity needs to be undertaken for betterment of colleges and HEIs. It has to be a part of the **Academic Calendar of the Universities**.

### ***Institutional Values and Best Practices***

The Kothari Commission Report (1964-66) gave a strong boost to community outreach and social orientation as a crucial function of education. All education being altruistic and transformative, this Criterion 7 appropriately carries high expectations from HEIs. The thrust of this Criterion is on a clear perception of the need of social, ethical, cultural, and environmental sensitization and enrichment of the learner. Additionally respecting secular and democratic traditions, developing a scientific temper, inculcating a sense of gender equity also call for an indulgent attention. Sustainability of these values is the touch stone of success in terms of substantial, observable outcomes. This observation also applies to Best Practices in all HEIs where tangible desired outcomes have to show themselves. As a result the final product in the form of the student will be a creative, cooperative, cultured, and useful contribution to citizenry of the nation and of the world in view of the global opportunities.





Similarly, their dissemination is also imperative for others to learn from. Universities themselves and through their affiliated and constituent colleges and HEIs are now seriously expected to sensitize the youth to the ponderous issues like Global Warming, Climate Change, Conservation of Energy, Gender Equity with Campus Safety (as recommended in the **Saksham** document of the UGC), and the like. In view of the Covid19 pandemic, training and orientation in Crisis/Disaster Management is a crying need of the day and critically useful in future. To see the lush green sprawling campuses of the universities is an exhilarating experience but their maintenance is the real challenge. There is a need to involve the students, and also to provide evidences regarding their involvement in the maintenance, especially during summer through earn-and-learn facility. Finally, love, respect, appreciation for ecology will have developed into a sustained attitude, a *Sanskar*, in the young, if the earth is to continue as a liveable place.

#### 7.1.4 Future Perspectives

The foregoing discussion amply points out the various steps required to be taken by the universities in order to answer successfully and confidently the ever-changing and increasing demands of the nation, the society and even the humanity in general in a globalised world. Education, both formal and informal, being a strong transforming and abiding force is particularly expected to address these needs in a world where the rate of obsolescence is mindboggling. The buzz word today in social and national activities is “sustainable development” for which all HEIs are called upon to contribute tangibly. Inculcation of the ability to learn on one's own, and continue to learn and change, can go a long way to infuse confidence in the learners to face real life challenges.

#### 7.1.5 Recommendations

The following recommendations and suggestions, emanating from the study of Peer Team assessment reports may offer useful guidelines to achieve desired outcomes.

##### *i. Government*

Governments are drivers of change. Therefore, most effective impetus for quality enhancement and sustenance can obviously come from government initiatives and efforts, as main policy makers and resource providers. Continuous reforms in education have come through government involvement, initiatives and support. It should be put on record with satisfaction and compliments that the Government of Maharashtra has taken good initiative for issuing guidelines for setting up an **Incubation Centre and also taken great interest in the A & A exercise, making Maharashtra a lead state in the activity.** The facility of Incubation Centre should be subsequently extended to universities in order to encourage innovation and **startup training** and help. As a matter of fact, one university has already set up an Incubation





Centre and results have started showing. In view of the provisions mentioned in detail in the draft New Education Policy (2019), the government initiative is of a substantial proportion without which quality concerns cannot be addressed satisfactorily.

- The first and the most urgently required help from governments is quick and complete recruitment of teaching and non-teaching personnel in universities and colleges, as there is a very large number of vacancies in both the categories all over the country, resulting in quality decline
- State IQAC is marginally functional and needs to be activated immediately
- Reports of the Peer Teams should be examined by Government for implementing the recommendations that fall within the government control
- Teacher training activities need boosting and government can help significantly
- Deputing teachers for training in foreign countries is desirable
- Funding for organizing Conferences, seminars, symposia should be made available
- Teachers should be helped with adequate financial assistance for attending national and international conferences, training programmes
- Disbursement of BC scholarships needs priority action
- Funding for publication of teachers' creative works may be made available
- Funding for setting up MIS in all universities should be made available.

### *ii. Universities*

Next to the government, it is the university that has an umbilical link with affiliated colleges and HEIs. Universities are expected to shed their isolationist stance and transfer their administrative and academic excellence to the affiliated HEIs. A university is a leader giving both ideas and directions for quality creation, enhancement and sustenance. In addition to their statutory authority and right to guide and monitor HEIs, universities should make those HEIs partners in benchmark elevation with the help of highly qualified, experienced and dedicated faculty. As of now, such academically ameliorative relationship on give-and-take basis is tenuous between the universities and the HEIs under their wings.

- University-college interface for academic transaction needs to be initiated with university faculty developing periodic live connectivity with college teachers through visits and digital mode.
- Efforts may be made to minimize and avoid serious glitches in the examination process by making it transparent, credible and punctual.



- Staff training for efficient use of MIS, LMS and related gadgetry should be organized on regular basis.
- Online digital teaching-learning pedagogy has to be strengthened through training for technology-efficient approach as it is expected to be used in an increasing measure in post-Covid19 scenario.
- In this context it needs to be mentioned that the SWAYAM online Portal launched by the UGC with over 2000 supplementary courses has received lukewarm response from universities and students. Considering the growing resort to digital learning it is imperative that universities and colleges encourage students to register for SWAYAM courses for advantage of Credit Transfer.
- IQAC involvement needs strengthening with the help of expert representatives from Industry, Corporate Companies, as also professional bodies like CA, CS, and NGOs, and possibly from foreign universities.
- University-College IQAC interface for academic improvement of colleges is desirable.
- Advantage of the **Paramarsh** programme may be fully exercised for mentoring the colleges for preparing for their 1<sup>st</sup> A & A exercise.
- A “finishing school” approach has to be adopted in order to meet the growing and changing demands and expectations of job markets, offices, civil services and the society in general.
- Job-ready as well self-dependent students can be prepared by setting up an efficient **well-equipped Incubation Centre** where startup training and initial help is available.
- Annual Academic Audit (triple “A”) scheme for all affiliated colleges and HEIs should be initiated / strengthened and monitored with regular periodicity by the affiliating universities.
- Feedback is futile if it is not analyzed, and mere analysis is futile if an Action-Taken Report (ATR) based on the analysis is eventually not prepared. All Universities need to initiate / strengthen and monitor this process at the earliest.
- **A tie-up/collaboration with foreign universities** needs to be established/ strengthened as a measure to heighten benchmarks and outcomes.
- Optimum use and help of the Alumni needs to be explored.
- For starting digital teaching-learning the HRD Ministry is giving a strong encouragement. B.Voc. , MOOCs and *Swayam* courses need proper promotional drive as they have a potential for preparing job-ready students by making value additions and giving interdisciplinary exposure.



- International Seminars and especially Webinar activities need strengthening and teachers may be trained in the activity
- Research orientation being the crucial function of universities, the healthy practice of earmarking Seed Money for both in-house Faculty and college teachers should be established, so that a greater number of MRPs are undertaken
- Universities themselves and through their affiliated colleges and HEIs are now seriously expected to sensitize the youth to address ponderous issues like Global Warming, Climate Change, Conservation of Energy, Gender Equity and Campus Safety (as recommended in the **Saksham** document of the UGC), and the like
- In view of the Covid 19 pandemic, training and orientation in Crisis/Disaster Management is a need of the day and it is critically useful in future
- Looming large on the horizon are new knowledge systems like Data Science/Analytics, Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Robotics. Universities should not delay their inclusion in the curricula, as they can provide workforce for new types of jobs waiting for them
- Only a couple of universities have Centre / Department of Fine Arts (ललितकला केंद्र, *Lalit Kala Kendra*), Film Studies Centre, where performing arts like Indian Classical Music, Indian Classical Dance, Dramatics and Dramaturgy, film appreciation are taught. These performing arts including “Voice Over” training have high employability and career advancement potential in the **booming and expanding market of the Entertainment Industry both at home and even abroad. Additionally, they have a strong Television exposure and self-employment potential** also. Such courses may be introduced in more universities and colleges.

## 7.2 Colleges

### 7.2.1 Introduction

This consolidated report on the observations and recommendations of the various NAAC Peer Teams covers almost 1600 PT reports of colleges that have been assessed for various numbers of Cycles from the year 2004 to most recent PT visits till March-end 2020. Of these, a little more than a hundred colleges and institutions have been assessed under the Revised Methodology of the NAAC effective from July 2017. The time span covered from 2004 to 2020 is an extended period of fifteen years, giving a panoramic view of the academic situation in our HEIs. Thus an updated quality status of the 1367 assessed and accredited colleges and HEIs in Maharashtra state is reflected in the present consolidation.





On the whole, a rather disparate and uneven picture of the quality status of colleges in Maharashtra seems to emerge from the perusal of this large number of the Peer Team Reports, calling for uniform and sustained hard work. It is a matter of concern that many colleges have not gone in for subsequent A & A process and the time lag is even eight or more years. The number of colleges that have not gone for any A & A is also very high and efforts are urgently needed to bring them into the mainstream. In both instances the reasons need to be investigated and remedial measures taken. (The UGC flagship programme of **Paramarsh** will go a long way to help colleges.) It should be noted that there are mediocre performing HEIs in urban areas and there are “islands of excellence” in rural areas. The ultimate objective of the A & A process is not to impose equality of mediocrity but to foster and fortify a fraternity of world class benchmarks in our HEIs. NAAC has been doing it with great involvement.

Colleges that are well-entrenched in years of long standing, are well-placed in conditions and circumstances conducive for advancement, enjoying fecundity of funds from various resources and have developed state-of-the-art and multi-faculty infrastructure, are naturally high performers in quality outcomes. Their galaxy of alumni rendering services to the society and the nation is undoubtedly welcome and praiseworthy, and they deserve high compliments. One can note with a sense of pride that there are Lead and Cluster Colleges, Star Colleges with DST, FIST, Colleges with Potential for Excellence (CPE), Best Urban and Rural Colleges honoured by their affiliating universities, and so on. Similarly, teachers have won laurels on national and international planes, and have acquired patents in a few cases

On the other hand, there are a large number of colleges and HEIs that are not well-entrenched in time, are not situated in circumstances conducive to growth, do not enjoy any funding either from the government or from other constant sources, and thus are victims of various deprivations and desiderata. Naturally they present a moderate performance. Even so, it should be put on record that such deprived institutions outnumber the affluent ones and still they are doing the most fundamentally valuable work of serving the aspiring rural societies in order to bring them into the national mainstream of progress and prosperity. Several colleges in the far-flung tribal and *adivasi* areas are indeed rendering yeoman's service in deplorably adverse conditions. As a result, some of our best talent in various walks of life has emanated from these under-equipped colleges and HEIs. Their contribution to nation building is in no way less precious and less welcome than of their better-placed urban counterparts.

We, along with the entire world, are passing through an unprecedented and unpremeditated catastrophe due to Covid 19 pandemic that has imposed incalculable and all-pervading disruption on life. No field of activity will be immune from the devastation. Whether the well-





off or the average institutions, both are going to encounter testing and turbulent times of countless quandaries and shortages in near future, such as resource crunch, enrollment decline, faculty deficit, shoestring budgets, and mindboggling obsolescence.

A shift from the “old normal” mode of chalk-and-talk pedagogy to the “new normal” of online teaching-learning cannot be achieved without training the teachers. SWAYAM, MOOCs and several competent agencies are already catering to the needs of hundreds of thousands of students in India alone. The **webinar boom** is an indication of the coming learning styles casting their shadows forth; it will help control costs for colleges. New styles and strategies for survival and sustained quality performance will have to be devised and deployed **without delay** after meticulous planning and a careful, constant institutional SWOC. Fast comprehension of daunting and detrimental issues and an equally fast remedial action will be the new lifestyle.

The emphasis put on development of science faculties and skills by most Peer Teams is certainly in the fitness of things. Science and technology have revolutionized our life, immensely improving it by catering to its physical needs. Comforts and conveniences, health and hygiene have phenomenally improved with the advancement of science and technology. Indeed, we owe our lives to the gifts of science. Even so, science and technology alone do not and cannot answer all human problems. Issues and needs of philosophical, spiritual, metaphysical, ethical, moral, aesthetic and civil nature transcend the boundaries of science and technology; and mere skilling is not education. These multiple inner needs of finer nature are supplied by liberal education, humanities and the arts. Therefore, it is crucial to emphasize the cultivation of their study, as the youth of today will compose the citizenry of tomorrow. They it is who will set the cultural standards and values of the future society. Hence the singular need to safeguard and cultivate the study of humanities in our schools, colleges and universities. Education of the young is a core function of a nation and it cannot be allowed to suffer serious damage in the absence of our preparedness. Tough times have besieged us. It is well-said, when the going gets tough, the tough get going. Our education system is certainly tough. But in the words of poet Tennyson we have to be ready—

*To strive to seek, to find and not to yield!*

### **7.2.2 NAAC Coverage: Action Plan Suggested**

**With critical observations, interpretations, suggestions and directions for implementation.**

#### *Curricular Aspects*

As a general observation, those institutions that have made efforts to offer a good deal of academic flexibility have also done better in the A & A results. The Semester System has been



accepted now by the teaching community, though the CBCS is still sorely limping behind. While an *a la carte cafeteria approach* is repeatedly recommended, most colleges have still to implement it, thanks to several obvious constraints, except for the Autonomous ones who have shown good initiative. Even so, a wide offer of courses is an inherent characteristic of the CBCS which is yet to settle. The government, the universities and the institutional Managements will have to address this quandary if our students are to develop multidimensional view and personality, which is an addition to increased employability. The same holds good of the enrichment and value addition courses. Most colleges are slow to introduce them under the all-pervading misconception that the (affiliating) university or the government will not approve/sanction them. (Several SSRs mention this!) First of all, no permission/approval is at all needed from any authority (except for the concerned college Managing Body) to launch as many enrichment courses as desired and required. They are the contribution of the college itself and the certification of completion is not tied to the university. The college identifies subjects, designs a course, sets the syllabus, identifies the instructors, sets the teaching schedule, makes the learning aids and materials available, conducts the final examinations and eventually issues a certificate of completion. The Autonomous colleges are alert on this count. Feedback on various activities is really a form of Quality Audit. As for the feedback requirements, *structured* and comprehensive feedback and its timely analysis with Action-Taken Report (ATR) are documented only in some colleges. Feedback from alumni and employees is practically missing in most colleges. Colleges need to note that feedback is futile if it is not analysed and analysis is pointless if it is not followed by an ATR. A well-prepared document on professional ethics also needs to be in place in all colleges. Regular organization of IPR seminars is needed in this context.

### *Teaching- Learning and Evaluation*

It is a good practice that in many colleges slow as well as advanced learners are given special additional coaching for higher performance. Several PTs have observed that in most colleges **a structured approach is missing** in these activities. Quite likely, the term “structured” is not understood. It essentially refers to a certain methodology or standard operating procedures (SOPs) set down for conducting an activity or completing a job in a zero-error manner, as also to get desired outcomes. There is a repeated advice by the PTs to use ICT. However, inadequate knowledge of technology, even aversion for its use among teachers is the main hurdle in the imaginative use of ICT. It should be underlined that PPT is only a tool, not ICT as a whole. It is observed that in almost all colleges the Learning Management System (LMS) is not used for tracking, record keeping and pedagogic help. Of course, using the LMS needs intensive training for the staff and adequate equipment for it with the students. Similarly, mentoring will have to increase in future as young people are enjoying greater freedom and



also inviting complicated situations in life. Hence mentoring activity needs strengthening through training to the teachers-mentors. NAAC insists on well defined statement of POs, PSOs, and COs. However, in most colleges POs, PSOs, COs are yet to be identified in detail and stated, failing which effective teaching as well as objective and exact evaluation are not possible. Evaluation of POs and COs is thus not possible in such a situation. It is therefore, urgently required to be practiced by colleges.

### *Research, Innovations and Extension*

Research and consultancy are not expected to be core activities of colleges (as they are in Universities), though, of course, they are desirable and advisable. More than 90% PT reports mention inadequacy (both quantitative and qualitative) of research output and activities in colleges. Acquiring higher degrees like Ph.D and M.Phil, presenting papers in national and international conferences, publishing in refereed journals are repetitive recommendations suggesting that even at college level teachers are expected to be seriously involved in research. It is an advantage that the teacher's research discipline and attitude percolate in some degree in the young learners, thus inspiring creativity and grooming them for the pursuit of innovation. Participation of students in *Avishkar / Anweshan* activities of research papers presentation is marginal and should be vigorously boosted to encourage research culture in institutions. Those teachers who have undergone research discipline alone can do it. Regular IPR seminars are also crucial. One lacuna repeatedly pointed out by many PTs is the near-total disconnect with industry. As a consequence, collaborative efforts, linkages for internships, apprenticeships, faculty exchange, and students exchange are marginal. So is the case with MoUs with industry and corporate houses where resources in the form of funds and human expertise are abundantly available. Until this disconnect is bridged, job-ready workforce from colleges will remain only an expectation. Outreach activities are a highlight of most colleges though detailed and timely documentation habits are yet to develop. A good **documentation** on the outreach activities for review and dissemination is not attempted by most colleges. It helps to review how many of the activities undertaken by the NSS Unit have yielded desired outcomes that are sustainable. Documentation as Data Bank can be also a source of guidance for other institutions.

### *Infrastructure and Learning Resources*

Infrastructural inadequacies along with physical facilities are a matter of concern as only the old, well established institutions have been lucky enough to have acquired sprawling spaces for campuses and development of facilities. It has been pointed out by a few PTs as a serious lacuna that the facilities for personal needs of women staff and also girls are neglected in some institutions. Washrooms and toilets are inconveniently located and are in inadequate





numbers. At the same time there are colleges that have set up vending machines for sanitary napkins and a small number of colleges even make the napkins. Their disposal mechanism like incinerator will have to be set up. Frequent Sanitization is going to be mandatory and essential in the post-Covid19 times. Libraries are an important component of infrastructure and in many colleges they seem to be upgrading themselves, though slowly, with equipment and learning resources. However, average daily footfall in the libraries of the faculty and students is a matter of grave and increasing concern. Librarians have to be innovative and enthusiastic to attract readers. a growing need of online resources will have to be addressed by libraries and librarians have to be trained for it. Maintenance is a challenge before most institutions, mainly for paucity of grants and other sources. In many colleges maintenance is contractual, that is outsourced, while some institutions allocate funds for it. Colleges should form maintenance committees and generate resources to streamline the activity. Similarly, systems and procedures for maintenance should be laid down in colleges.

### *Student Support and Progression*

Most of the scholarships for students are government instituted on a large scale as a welfare scheme and they are channeled through colleges, usually through cheque payment or direct deposit in Banks. Institution sponsored Merit Scholarships are marginal in numbers though networked institutions with large number of colleges do make provisions for monetary help to students in this, that or the other form. Free higher education as a state policy will be a great boost to women's progress and gender welfare. It may also help to stall girls' dropout which is noticeable in rural areas. The culture of large scale participation of girls in sports needs to be fostered with particular efforts. This is also an asset building activity for health as a large number of girls (and women) in the country are anaemic. A healthy mother is a strong pillar of the family. Creation of awareness about diet, hygiene, self defense, legal rights and mental health is a serious issue which needs attention and remedy from colleges. It is surprising that documentation about students' progression to higher courses is irregular, even not maintained in many colleges. They seems to miss the point that such documentation will ease the tracking problem and help them build an inclusive Alumni Association also. Coaching for competitive and other qualifying examinations such as NET, SET, SLET TOEFEL etc., as it is done in only a few colleges. It is crucially needed to be robustly undertaken, as most PTs have rightly recommended it. Graduates in Maharashtra are opting for Civil Service jobs in an increasing number. Training is urgently needed for them. The same negligence is observed about forming Alumni Associations, as their crucial role in development is not understood, and therefore not explored. Where they exist they are mostly decorative, defunct, and non-productive. They should be explored for a full, creative involvement. In many cases they are not registered. Registration is a valid recognition of the activity.





### *Governance, Leadership and Management*

Most of the colleges have now displayed their Vision and Mission statements prominently. However, in a number of cases the Vision Statement is not formed succinctly; also the Mission Statements are not worded correctly due to inadequate understanding of the concepts. In a few cases the PTs have not been observant enough about this quandary and desideratum. Awareness needs to be created in institutions about the importance of wording the Vision and Mission statements succinctly and correctly. The same lethargy is observed in the case of a **Vision Document / Strategic Planning / Perspective Plan**. This extended document requires considerable brainstorming among the Governing Body, the IQAC, and the staff with the help of experts from Management Studies and Industry who usually prepare such documents. It is expected to look ahead at least 10 years, though it may be reasonably argued whether such a definitive plan can at all be relevant in the face of a very fluid, complex and unpredictable future in the post-Covid-19 world! Even so, preparing a Perspective Plan / Vision Document is an exercise useful for growth. It is a repeated observation of several Peer Teams that in a large number of cases the IQAC is more cosmetic than robustly functional as a Think Tank. Meetings are not held regularly and the business transacted is routine and perfunctory, rather than innovative and ambitious. External experts do not attend regularly in many cases. A comparable case is of the college website also which is less regularly updated and is more of a technical fulfillment. Modern systems of governance and management require sophisticated technology help like the MIS. Most colleges do not have this system. Those who have tried it are not satisfied with the performance. The costs are prohibitive. Eventually colleges will have to depend on their computer departments and evolve the system in-house to answer their requirements. It is the responsibility of the IQAC to conduct annual **Academic Audit** with the help of external experts, though this is a neglected requirement for quality monitoring. Only a few universities and colleges implement this, though not very regularly. It is the colleges themselves that should take the initiative if universities are not forthcoming.

### *Institutional Values and Best Practices:*

All education being altruistic, that is to say meant for the benefit and welfare of others, the Kothari Commission Report (1968) was very visionary in pointing out the fulfilment of all education in the creation of a healthy, happy social change by cultivating a cultured, responsible and mature citizenry. In most developed countries the “**Town-Gown**” connect is regarded as an inalienable quality of an institution of learning. Universities and HEIs are no longer “islands” of excellence; they are very much an integral, inseparable part of the society in which they work. The 7<sup>th</sup> Criterion of the NAAC instrument of assessment, therefore, rightly brings under full focus the social orientation of education through institutional values, Institutional Social Responsibility (ISR) and Healthy / Best Practices and their “situatedness”.





In many institutions the teaching and the non-teaching staff include a reasonably increased number of women. However, Peer Teams have pointed out in some cases that catering to the personal needs of girl students calls for a serious attention in institutions. Provisions recommended in the UGC document, *Saksham*, (2013) have to be implemented at the earliest for the safety of girl students on the campus, as it is seen from the PT reports that there is no mention of the *Saksham* provisions being in practice. As for environmental awareness, several colleges try to keep the campus green and in some institutions **Green Audit** is conducted. However, it is observed that the Green Audit is outsourced! This needs modification. It is alright to seek external expert advice and help, but the entire activity has to be the responsibility of the institution through the students. Love, respect and caring for ecosystem—the *flora and fauna*—is a matter of *Samskar*, an abiding cultivation of a mindset, which education is necessarily expected to impart to the young. Therefore, active and large **scale participation in the Green Audit** activity is advisable and desirable. Similarly, a short, interesting Certificate course like Ornithology (study of birds), medicinal plants, can go a long way in making the said *Samskar*. The Civil Society has increasing demands from HEIs now. If the scope is slightly expanded, then greater and more conscious efforts are needed to inculcate awareness about rights and duties and responsibilities of good citizenry. This will satisfactorily answer the **NAAC Core Values of Contribution to National Development and Inculcation of a Value System among Students**. An observation is pertinently relevant at this point about the conduct of **Best Practices**. Although all colleges have identified their specific or generic Best Practices, the identification and analysis of tangible and sustainable outcomes of the practices is uniformly missing. An activity is futile if it fails to show desired tangible and durable outcomes. Colleges need to pay particular attention to this lacuna.

### 7.2.3 Recommendations

#### I. Government

Government has a pivotal role to play as a chief custodian of the future of the young generations.

- Higher Education Institutions (HEIs) in the state are squirming under inadequate manpower. All Peer Teams of NAAC have repeatedly and uniformly pointed out the large number of vacant faculty and non-teaching positions in almost all aided (as well as unaided, self-financing) colleges and HEIs. As for the aided ones, both the sanction and the funding have to come from the government. **Appropriate measures of recruitment drive are urgently called for in order to help the HEIs to survive**
- The Choice Based Credit System (CBCS) is recommended by the UGC in order to meet global standards. Most Peer Teams have recommended its initiation in colleges. The





system requires an *a la carte* cafeteria approach of the HEIs. This is not possible without recruiting a large number of trained faculties. **This calls for a liberalized policy of faculty recruitment**

- Repeated recommendations of the PTs include linkages with industry for expert consultancy, apprenticeships, internships and MoUs for developmental activities. In most cases there is a glaring disconnect between academy and industry. While academy is willing to approach industry, the response from industry is not much encouraging, almost negative. **The government, therefore, should insist upon industry to form linkages with academy**
- Paucity of funding is all-pervading in colleges and HEIs. The CSR activity is mandatory for industry but Universities, colleges and HEIs are excluded from its scope. **The government should ask the industry to earmark some percentage of its funds for colleges and universities. Regulations may be passed in this context**
- The erstwhile scheme of **non-salary maintenance grant may be reinstated**
- **Free higher education for girls** will be a boost for gender equity
- **State IQAC needs encouragement** for rejuvenation. Its existence is felt only in its absence.
- **If colleges are to have state-of-the-art equipment, it cannot be done without adequate funding which is expected to flow from the state government.**

#### *ii. Universities*

- Universities may shift their roles from controller to facilitator, from administrator to mentor for affiliated colleges and HEIs
- There is a crying need to expand the curricula in colleges to accommodate skills-based, job oriented, need based Certificate, Diploma courses. Most PTs have also repeatedly made this recommendation to colleges but to no effect in a significant way. Colleges wriggle under the affiliating system as it precludes them from stretching the curricular boundaries. It has become an excuse for colleges for not modernizing the curriculum or for not introducing innovative programmes. It is time the universities adopted a helpful, accommodative and flexible approach in granting permission to colleges to launch new programmes after proper quality scrutiny
- A live academic give-and-take may be established with colleges by sharing faculty expertise
- A representative from the University IQAC may be deputed as a Member of college IQACs



- Grant of Token Seed Money may be extended to college teachers also
- Grants may be allocated to establish MIS in colleges
- Colleges that have not volunteered even for the first Cycle of A & A of NAAC may be groomed on priority for the process by activating the UGC flagship programme, **Paramarsh**
- Several professional colleges that have not gone in for the second or subsequent Cycles of A & A, may be helped to do so
- Frequent training programmes through Academic Staff Colleges for college teachers may be organized to update and upgrade innovative techno-aided pedagogies
- Retired approved faculties in good health may be allowed to work as visiting teachers in both granted and non-grant colleges
- Retired faculties with research experience and those who have been approved as research Guides may be allowed to work up to 70 years of age (health permitting) as there is a severe paucity of research guides
- An increasing resort to e-modes of organizing all examinations related work may be adopted phase-wise but urgently to satisfy the statutory needs of observing the time frame for declaration of results and to minimize, if not to totally eliminate, human intervention and errors
- Weightage for Formative evaluation may be increased to reduce the burden on the Summative evaluation and the consequent delays and glitches in the final results

### *iii. Colleges*

Colleges have to pick up courage to stretch their boundaries of curricula by adding skills-based, job-oriented value additions and enrichment Certificate, Diploma short programmes with credit gain. These do not need permission from the university as the Degree certification is local / institutional (and not from the university).

Here are some high-frequency repeated Recommendations of the Peer Teams:

- Vacancies in faculty positions and staff should be filled in
- IQAC may be strengthened with representatives from Industry
- Regular meetings of the IQAC may be held
- Value-added and Enrichment Certificate, Diploma Courses may be launched
- Structured Feedback mechanism may be used in core activities



- Feedback Analysis and Action-Taken Report must be prepared
- Job oriented, entrepreneurial development and online courses may be started
- Annual Academic Audit may be conducted
- CBCS may be implemented
- A Perspective/Strategic Plan, Vision Document may be prepared (for the next 10 years)
- Alumni Association may be registered, strengthened & involved in development
- Teachers should publish in standard, approved journals given in the UGC CARE list
- Seed Money for research activities be allocated
- English Communication Skills may be taught
- Language Lab may be set up
- Automation, computerization may be introduced
- Learning Outcomes may be clearly defined
- Coaching for competitive examinations may be started
- Linkages with Industry may be established
- The high dropout rate in some cases, especially of girls, needs to be analysed and remedial action be taken, like retaining the girl learner in the stream through online help, provision of transport, wherever possible
- It needs to be mentioned that the SWAYAM online Portal launched by the UGC with over 2000 supplementary courses have received less response from universities and colleges. Considering the growing resort to digital learning it is imperative that colleges encourage students to register for SWAYAM courses for advantage of Credit Transfer





For Communication with **NAAC**

The Director

**National Assessment and Accreditation Council (NAAC)**

*(An Autonomous Institution of the University Grants Commission)*

P.O. Box. No. 1075, Nagarbhavi  
Bengaluru - 560 072

*Phone* : +91-80-2321 0261/62/63/64/65

*Fax* : +91-80-2321 0268, 2321 0270

*E-mail* : [director.naac@gmail.com](mailto:director.naac@gmail.com)

*Website* : [www.naac.gov.in](http://www.naac.gov.in)



